VOLUME LV NUMBER FOUR

THE NATIONAL GEOGRAPHIC MAGAZINE

APRIL, 1929

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IMMEDIATELY after the terrific eruption of the world's largest crater, Mt. Katmai, in Alaska, a National Geographic Society expedition was sent to make observations of this remarkable phenomenon. Four expeditions have followed and the extraordinary scientific data resulting given to the world. In this vicinity an eighth wonder of the world was discovered and explored—"The Valley of Ten Thousand Smokes," a vast area of steaming, spouting fissures. As a result of The Society's discoveries this area has been created a National Monument by proclamation of the President of the United States.

AT an expense of over $50,000 The Society sent a notable series of expeditions into Peru to investigate the traces of the Inca race. Their discoveries form a large share of our knowledge of a civilization waning when Pizarro first set foot in Peru.

THE Society also had the honor of subscribing a substantial sum to the expedition of Admiral Peary, who discovered the North Pole, and has contributed $25,000 to Commander Byrd's Antarctic Expedition.

NOT long ago The Society granted $25,000, and in addition $75,000 was given by individual members to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees of California were thereby saved for the American people.

THE Society has conducted extensive excavations at Pueblo Bonito, New Mexico, where prehistoric peoples lived in vast communal dwellings before the days of Columbus; it is sponsoring an ornithological survey of Venezuela, and is maintaining an important photographic and botanical expedition in Yunnan Province, China.

TO further the study of solar radiation in relation to long range weather forecastings, The Society has appropriated $60,000 to enable the Smithsonian Institution to establish a station for four years on Mt. Brukkaros, in Southwest Africa.

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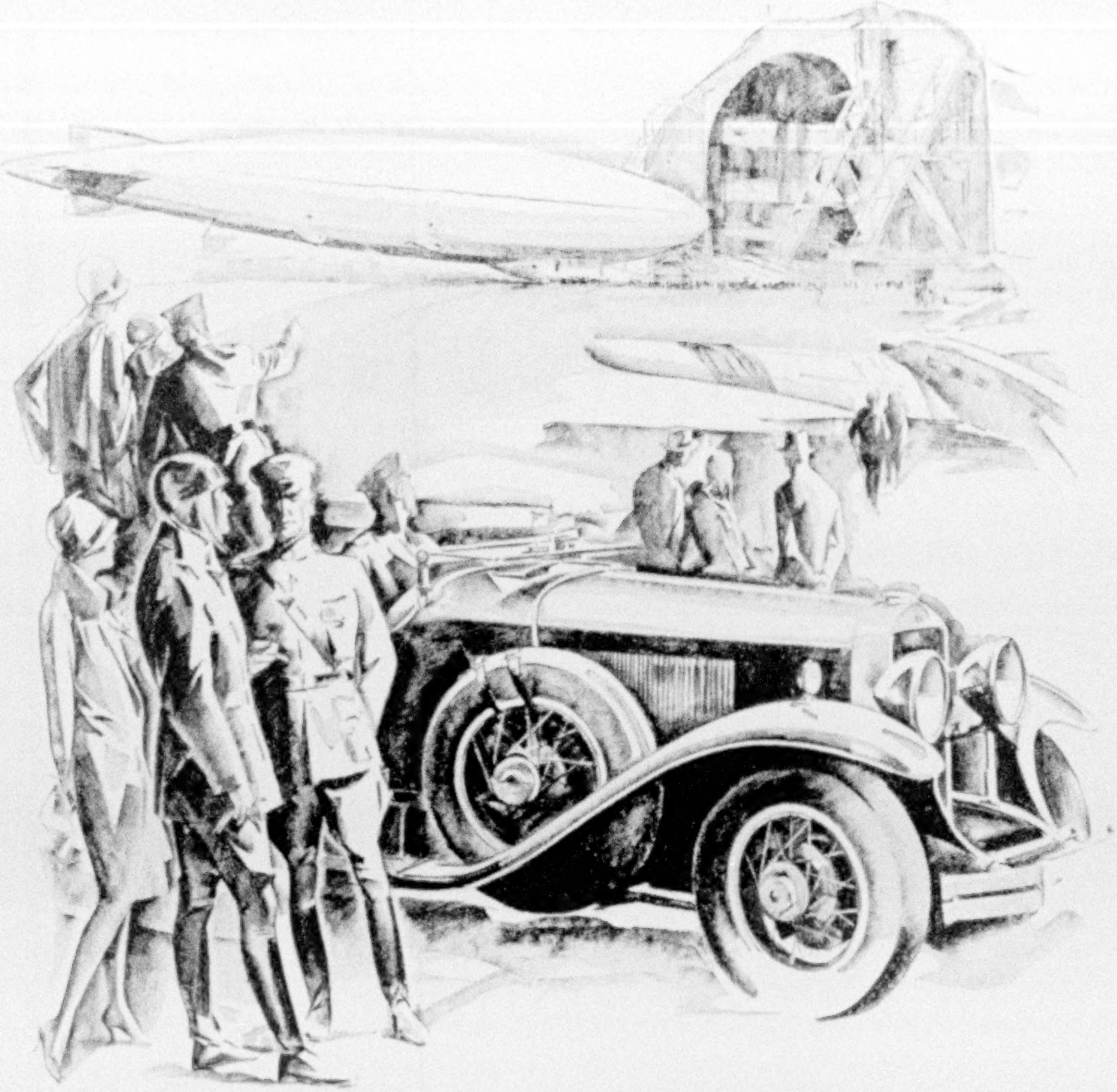

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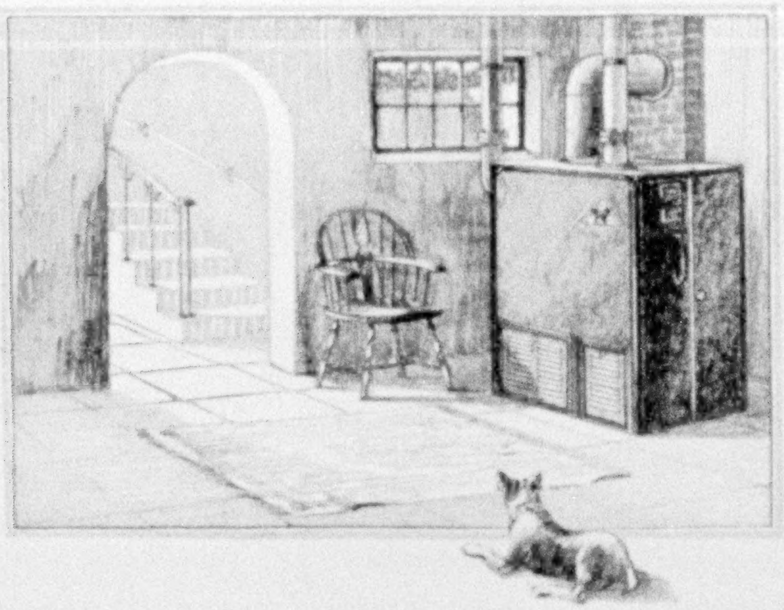

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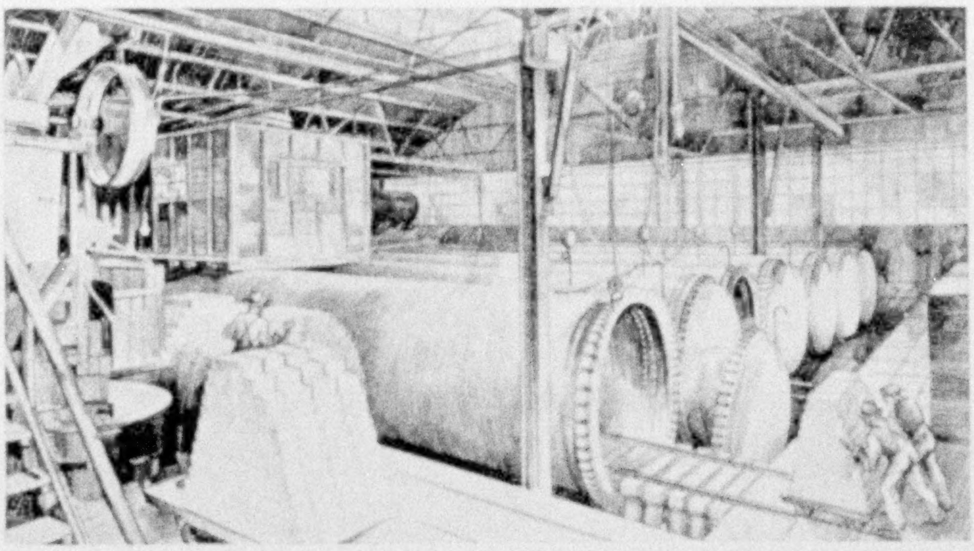

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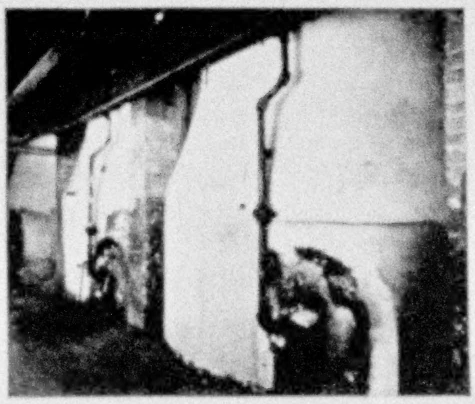

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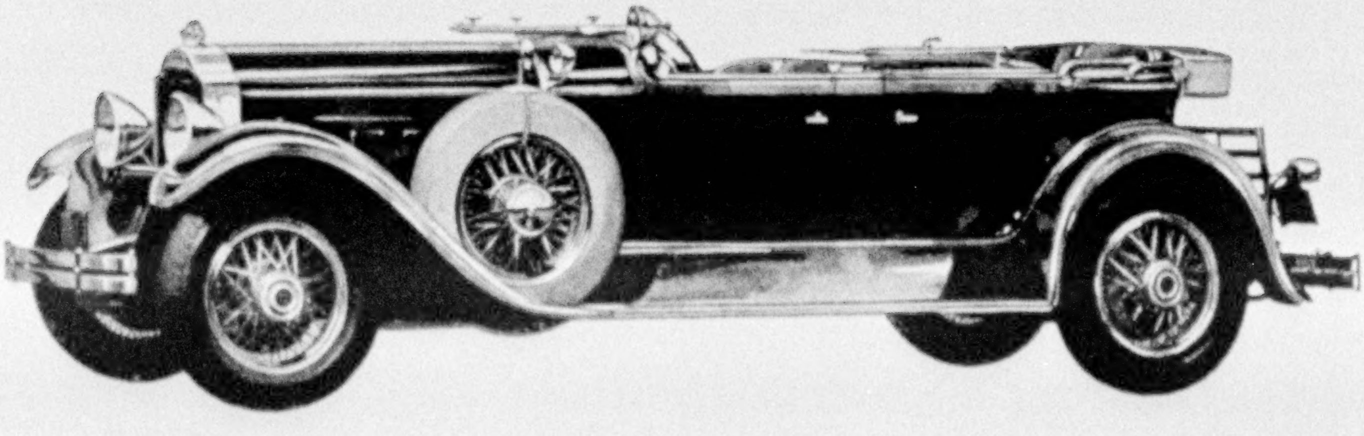

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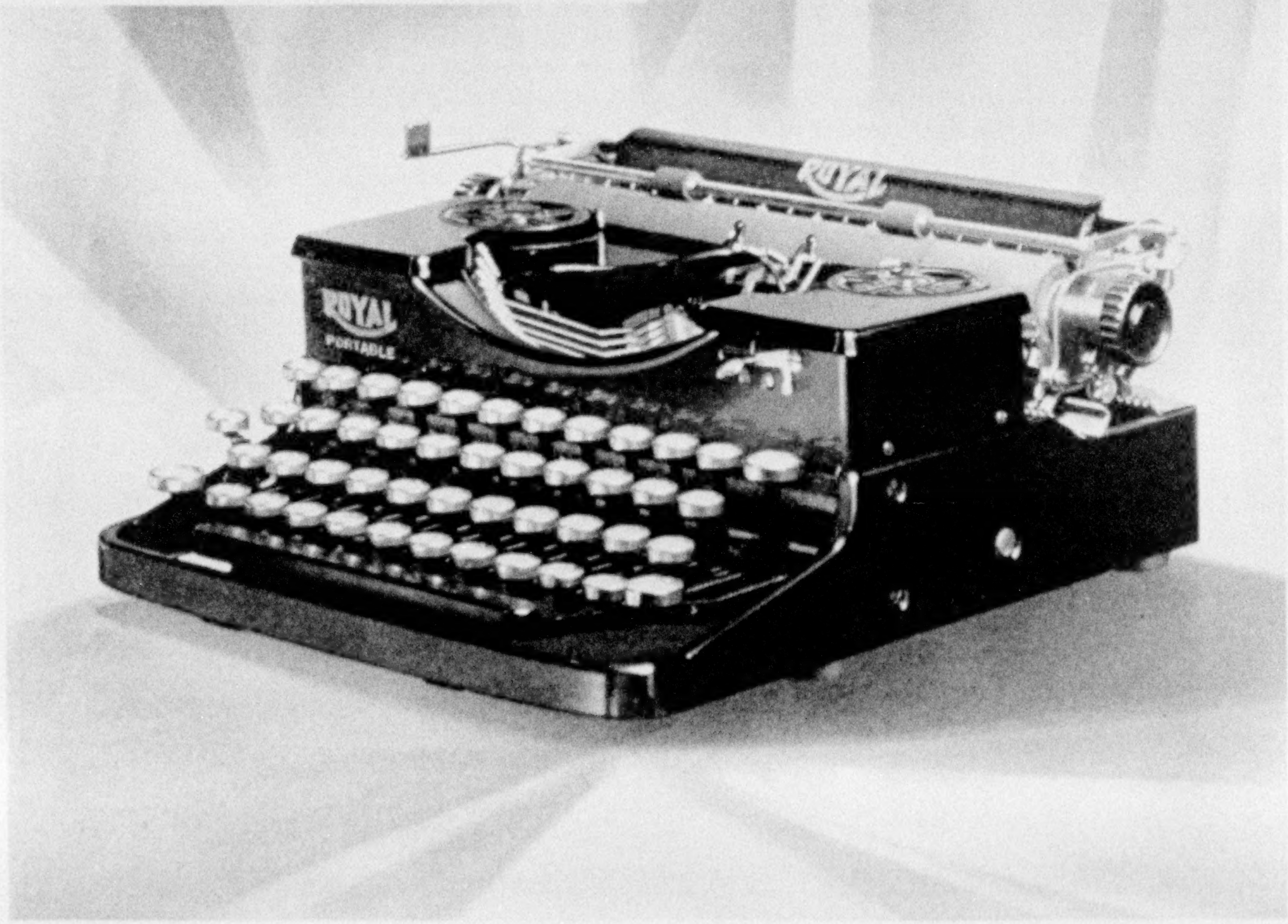

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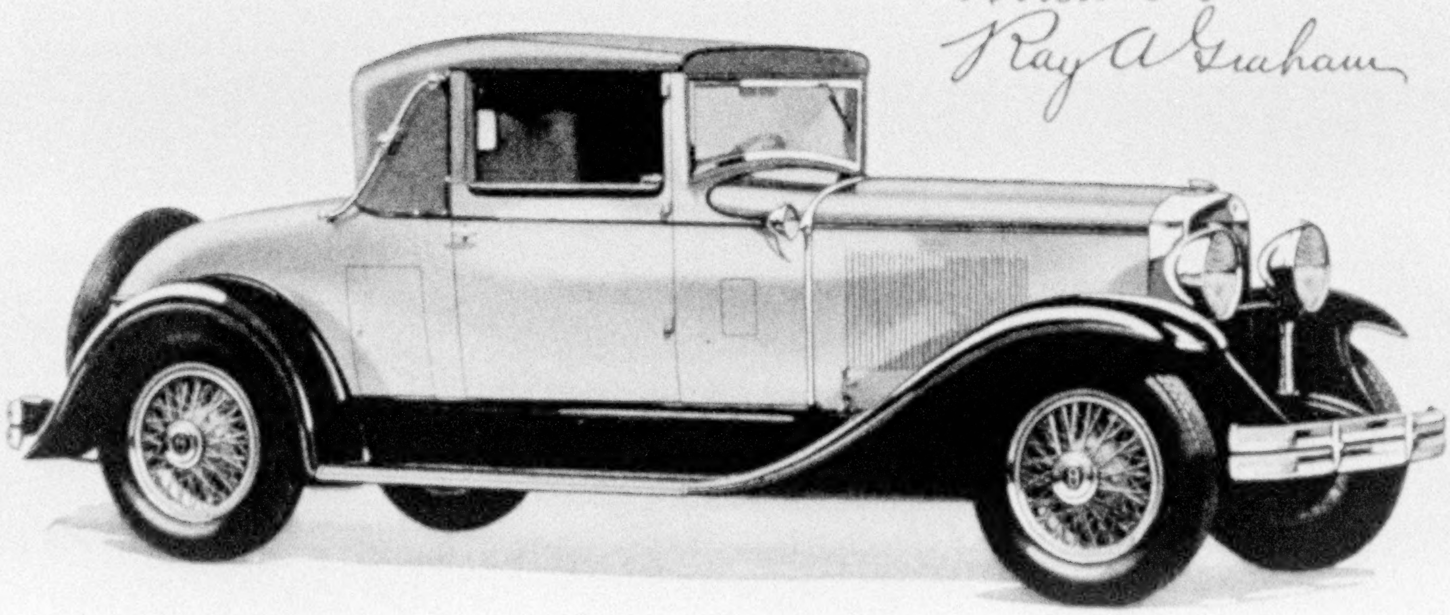

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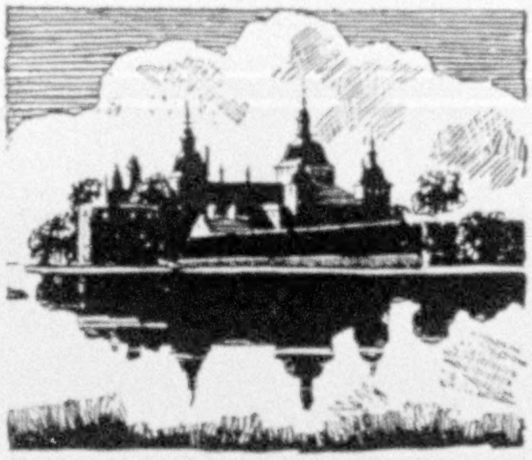

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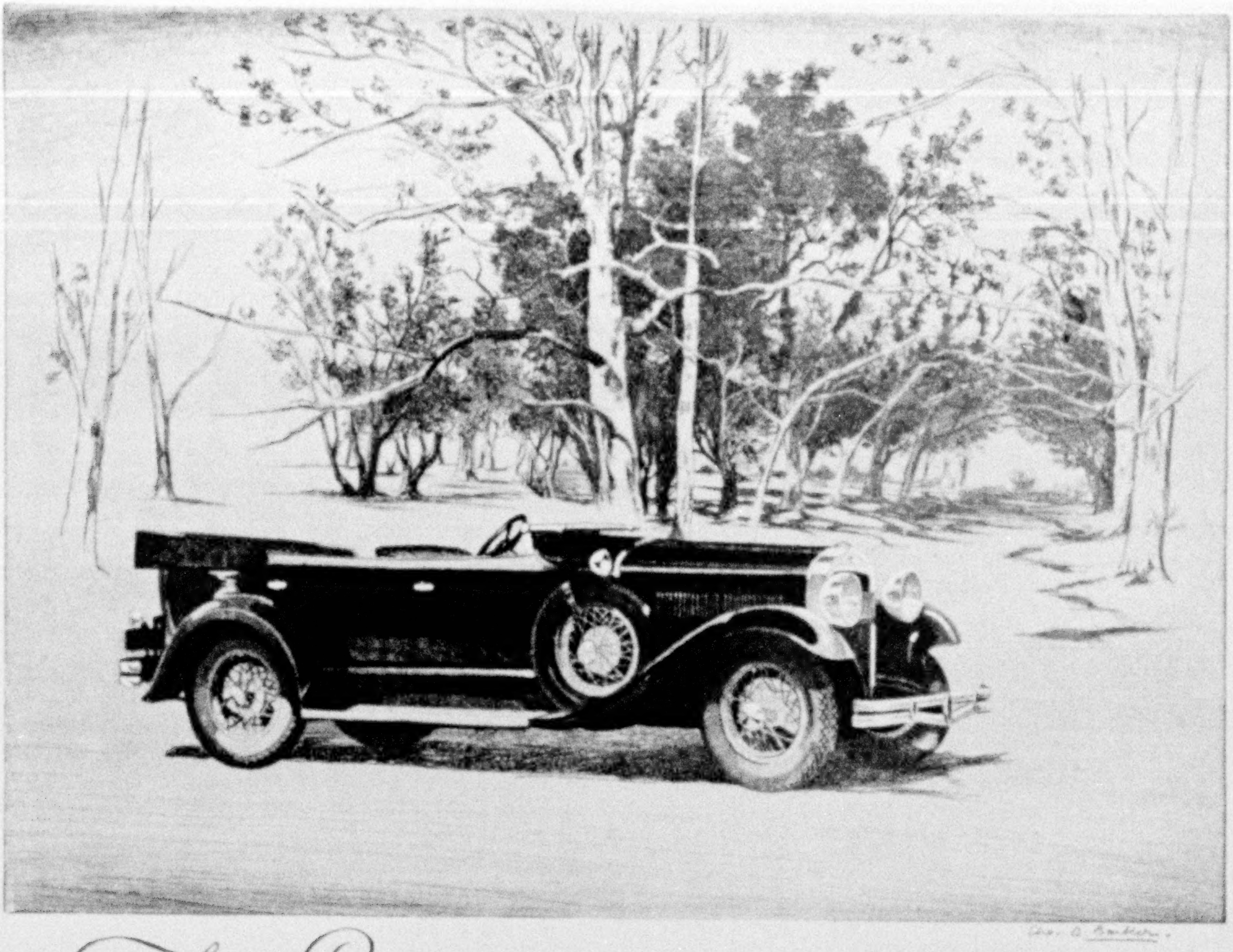

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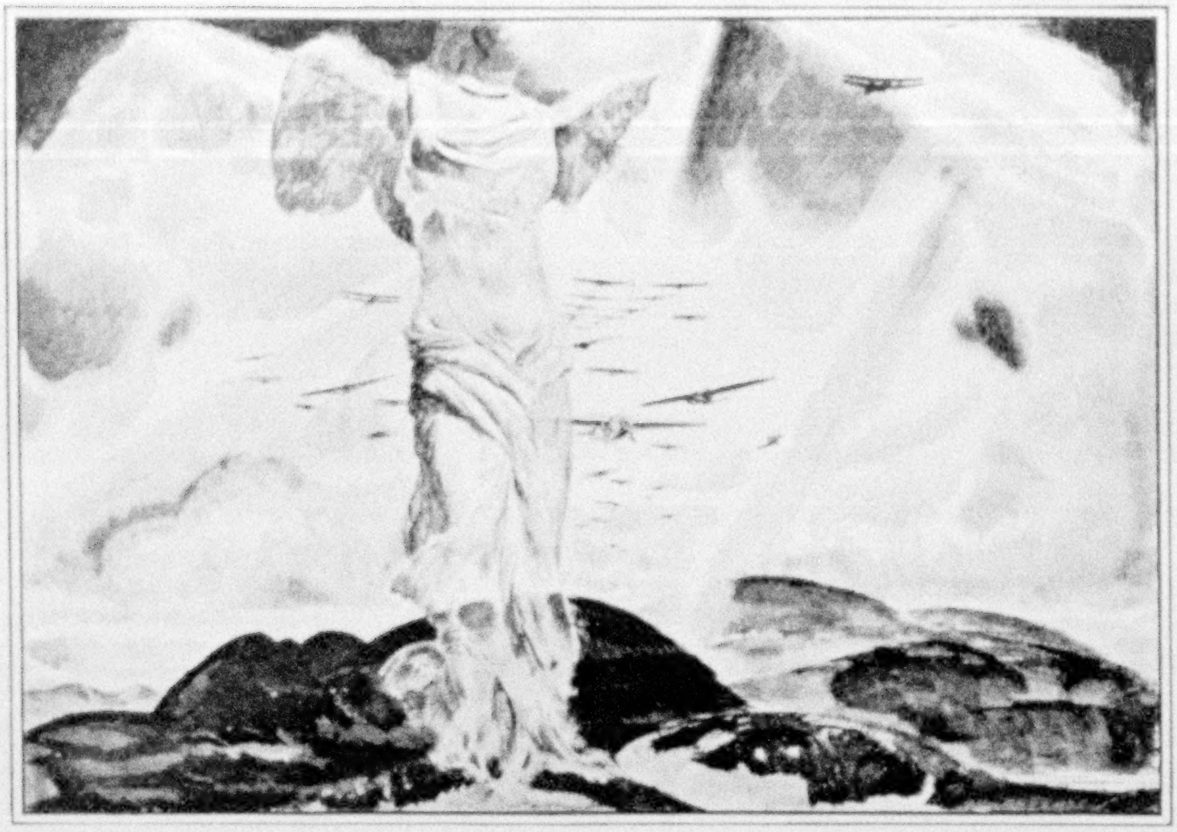

WHEN FLEDGLINGS FLY

You've seen, perhaps, the robins pushing fledglings from their nest in spring . . . the flurry of feathers, the frenzied teeterings, the terrified chatter, and then erratic swoops to fearful landings on some leafy shrub. . . . You've seen them later in the summer when you've become aware suddenly of a new beauty in the plump young robins singing lustily upon the lawn. . . .

If the Spirit of Conquest that launched the fledglings out into the world had ever faltered in courage or instinctive resourcefulness, you'd never hear the flute-like song of robins against the locusts' rasping violins.

Fledgling man is today launching himself into a new world of space. We can as yet see only the daring flights of those who lead the way across the skies. But who can say what argosies will sail along the paths where they first winged their way? *Were it not for the ambitious urge in the hearts of brave men, we would never see the conquest of the sky . . . we would never lift our faces from the brown still earth!*

Were it not for bold hearts and quick, shrewd resourcefulness, we would have no skyscrapers reaching to the stars, no lacy bridges high over hungry floods, no tunnels through the darkness of the earth and rock below us, no roads of stone and steel, no webs of wire to guide the fluent lightning to our needs. . . .

In the life and growth of civilization, courage and quick, shrewd resourcefulness are the weapons of men, of businesses, and of communities, that achieve success. Even dollars and opportunities are but fledglings that must be launched with confidence and courage into a hostile world, sustained by everlasting energy and resourcefulness. Timid hesitation has little share in modern business.

Who then are the courageous pioneers of today in our population of 120,000,000? Are not the greatest of them the men who dare to launch and fly our winged ships of the air? Are they not the men who build the flying-fields, nests for these giant birds, upon the ragged fringes of blind and torpid cities? Are they not the captains of industry, of commerce, of transportation who are showing civilization safe ways across the free sky?

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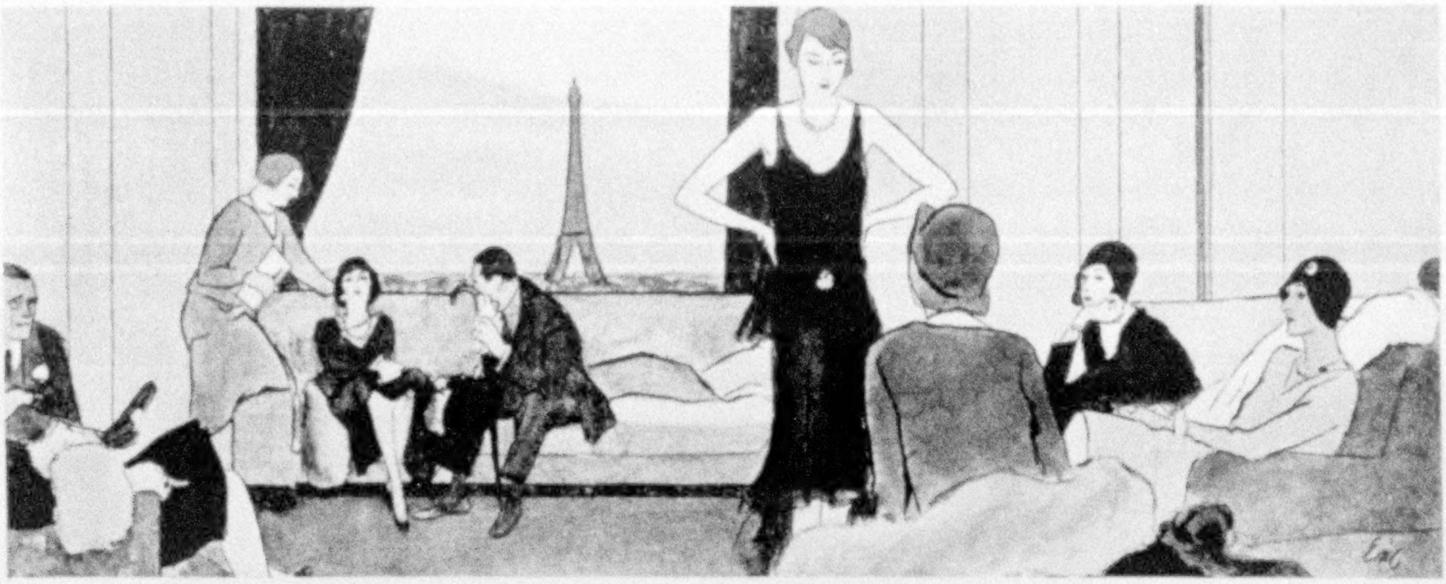

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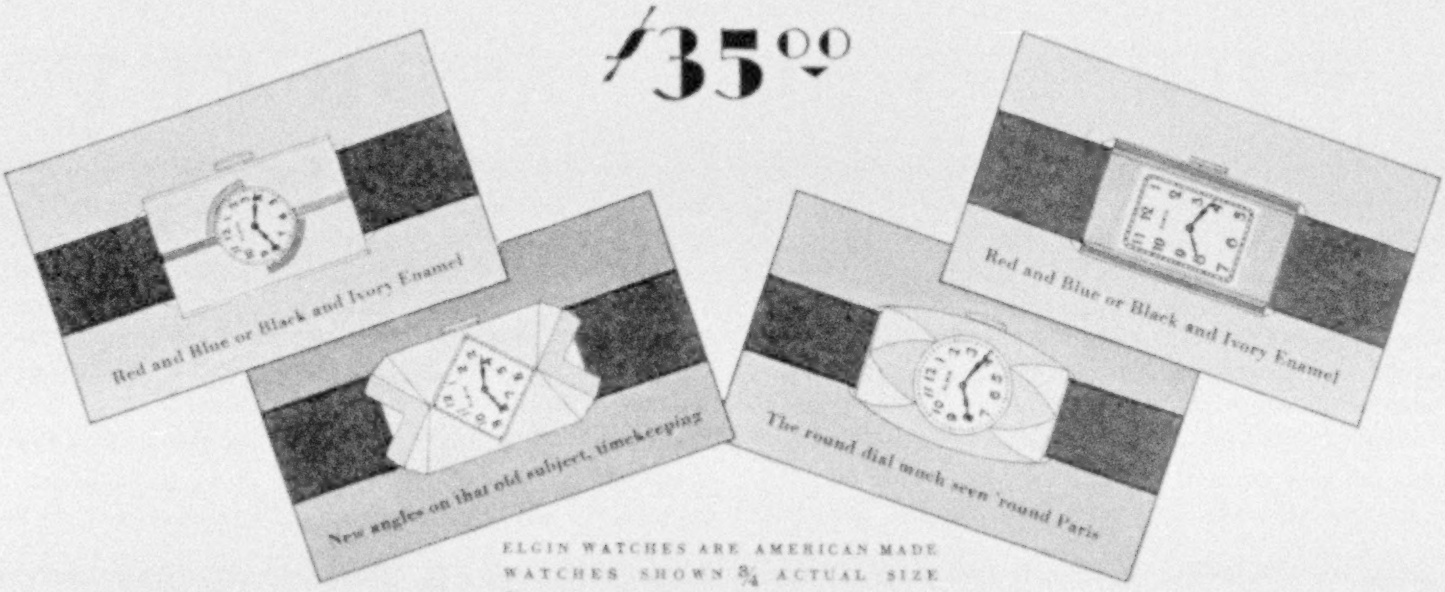

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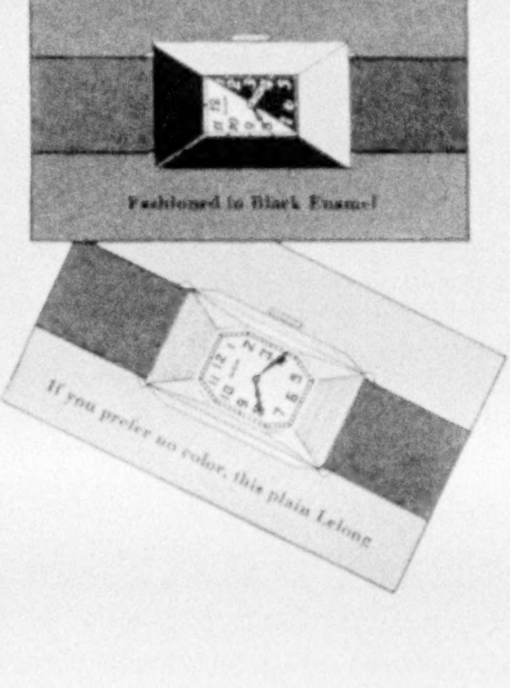


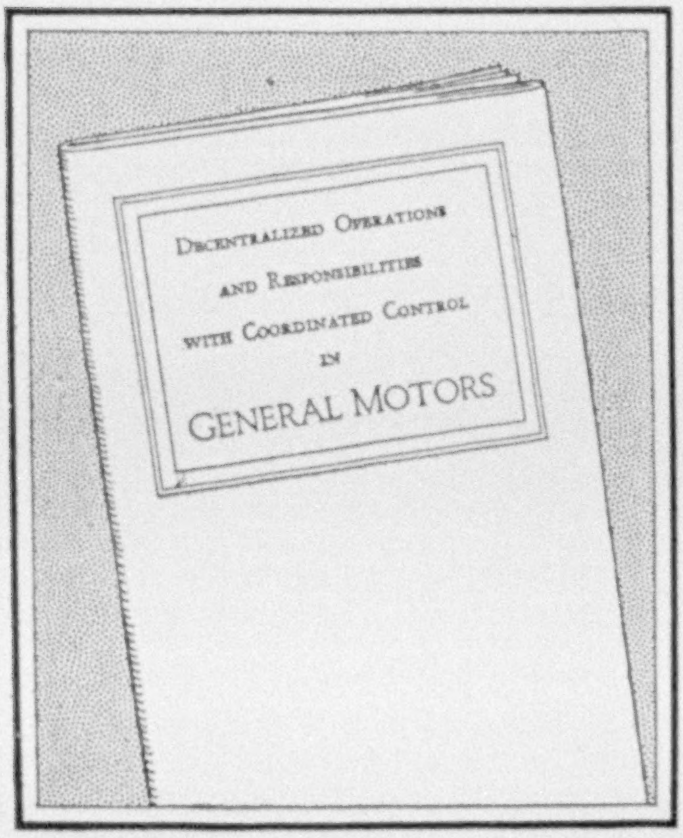
Now Lelong puts into watches that same chic you find in a frock that bears his noted label. The same flair for style, the same air of worldly charm. And the vast efficient ELGIN factory makes a stylist's dream a reality to gleam upon your wrist.

And such versatile watches, these Lelong models. Harmoniously in the picture, whether the golf course, or the tea table is your background. Then, too . . . it's so simple to have extra ribbons to match the colors of your evening gowns and your Parisienne watch will give a true Parisian flair to your formal hours.

Three are plain; three are inlaid with lustrous hard enamel. And all are brilliantly smart. Ask any jeweler to show you his sparkling tray of ELGIN Parisiennes. And not only Lucien Lelong, but Agnes, Jenny, Premet, and a group of equally prominent leaders of the Paris Grande Couture are represented.

A Parisienne costs but $35, there is no duty on *designs*. Style genius pays no fees at the customs house. Paris style . . . at a truly American price!

DECENTRALIZED OPERATIONS *and* RESPONSIBILITIES *with* COORDINATED CONTROL *in* GENERAL MOTORS



A COPY of this booklet, "Decentralized Operations and Responsibilities with Coordinated Control," will be mailed free upon request to Department K-5, General Motors Corporation, Broadway at 57th Street, New York, N. Y.

THE manufacturing divisions of General Motors, from the standpoint of administrative management, are self-contained organizations, each with a general manager responsible over all its functional activities, such as engineering, purchasing, production and sales; and including financial control.

Yet there must be a sound measure of centralized control over the manufacturing divisions to assure the proper coordination of activities and to capitalize the advantages derived from the size and importance of the institution in the industrial world.

How General Motors secures the decentralization of operations and responsibilities with coordinated control is set forth in the booklet shown on this page.

In addition to its Annual Report and Quarterly Statement of Earnings, General Motors issues special booklets, from time to time, for the information of its stockholders, employes, dealers and the public generally. Many of the principles and policies outlined in these booklets are applicable to other businesses.

GENERAL MOTORS

"A car for every purse and purpose"

CHEVROLET · PONTIAC · OLDSMOBILE · OAKLAND · VIKING

BUICK · LaSALLE · CADILLAC · *All with Body by Fisher*

GENERAL MOTORS TRUCKS · YELLOW CABS and COACHES

FRIGIDAIRE—*The Automatic Refrigerator* · DELCO-LIGHT *Electric Power and Light Plants* · DL *Water Systems* · GMAC *Plan of Credit Purchase*

"The Blanket"—Taos-Puye Indian-detour, New Mexico—by E. I. Couse, N. A.

Why not, this summer?

gratify that great urge of the wanderlust Go-see Far West scenic regions.

Take the Indian-detour in the cool New Mexico Rockies—meet real Indians in their pueblos and see prehistoric cliff dwellings.

—with a Courier-hostess in the party who likes to answer questions.

—And see the dude ranches, mile-deep canyons, sky-high peaks, national parks and national forests.

—with Grand Canyon and Yosemite as crowning glories.

—and at journey's end CALIFORNIA—the land where travel dreams come true.

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daily Xcursions

to California, to the Colorado, Arizona, New Mexico Rockies, *and the* National Parks.

Santa Fe - cool summer way

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Santa Fe

W. J. Black, Pass. Traf. Mgr., Santa Fe System Lines, 952 Railway Exchange, Chicago, Ill.

Am interested in Summer trip to ________________

Please send me detailed information and folders, "California Picture Book", "Indian-detour", Grand Canyon Outings"

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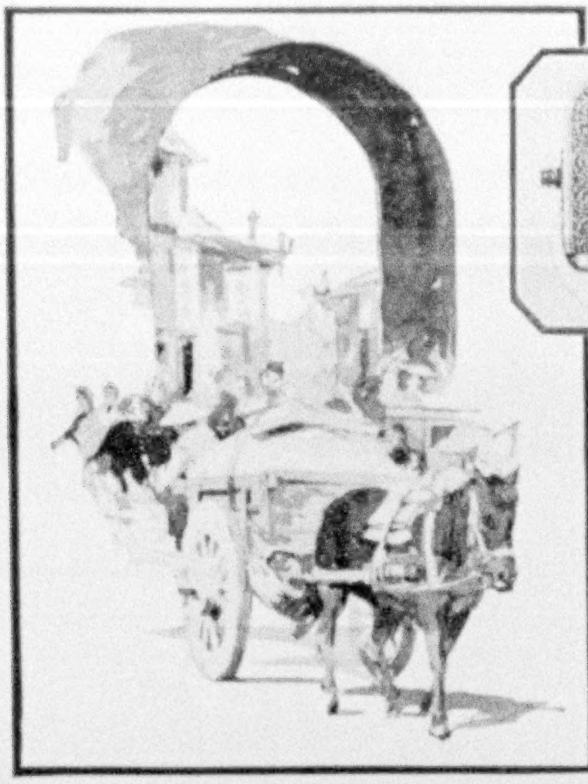


Filmo 75

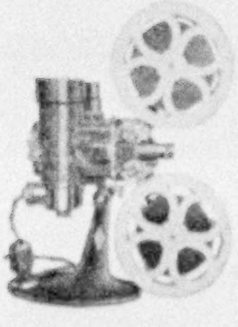
Weighs only 3½ pounds. Fits the pocket. Beautifully embossed. Your choice of walnut brown, ebony black or silver birch color. Price $120, with carrying case.

See the queer sights all over again . . . in

FILMO MOVIES

It is pleasant to journey afar—visit foreign countries—see other peoples, ways, customs. But it is even *more pleasing* to bring back movies of the choicer scenes—that you may see them all over again—in action—and let your friends enjoy them.

A Filmo movie camera, of course! Essential, if you want to bring back pictures that are clear and beautiful—even when taken under the adverse light conditions so frequently encountered.



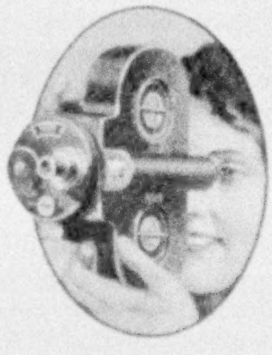
Filmo Projector

Simple, safe, compact and portable. Weighs but 9½ lbs. Projects pictures of a steady brilliance unequaled by any other 16 mm. projector. Priced at $190, including case.

Filmo is easier to operate than a *still* camera. Merely look through the spy-glass view-finder, press the button and "what you see, you get." No focusing for distance—no tripod needed—no crank to turn. A simple, compact, self-contained *unit* surpassing all others in performance because of the highly specialized experience behind it. Filmo is a quality product built by Bell & Howell, for 22 years leading manufacturers of professional movie cameras and equipment.

For black and white pictures Filmo cameras use Eastman Safety Film (16 mm.)—in the yellow box—both regular and panchromatic—obtainable at practically all dealers' handling cameras and supplies. Filmo Cameras and Filmo Projectors are adaptable, under license from Eastman Kodak Company, for use of Eastman Kodacolor Film for home movies in full color. Cost of film covers developing and return postpaid, within the country where processed, ready to show at home or anywhere.

See a nearby dealer for demonstration or write for illustrated, descriptive booklet—"What You See, You Get."



Filmo 70

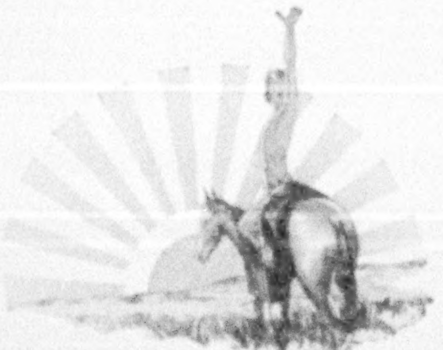
The most flexible and highly perfected personal movie camera obtainable at any price. $180 with carrying case. Uses 100 ft. rolls (16 mm.) film.

BELL & HOWELL

Filmo

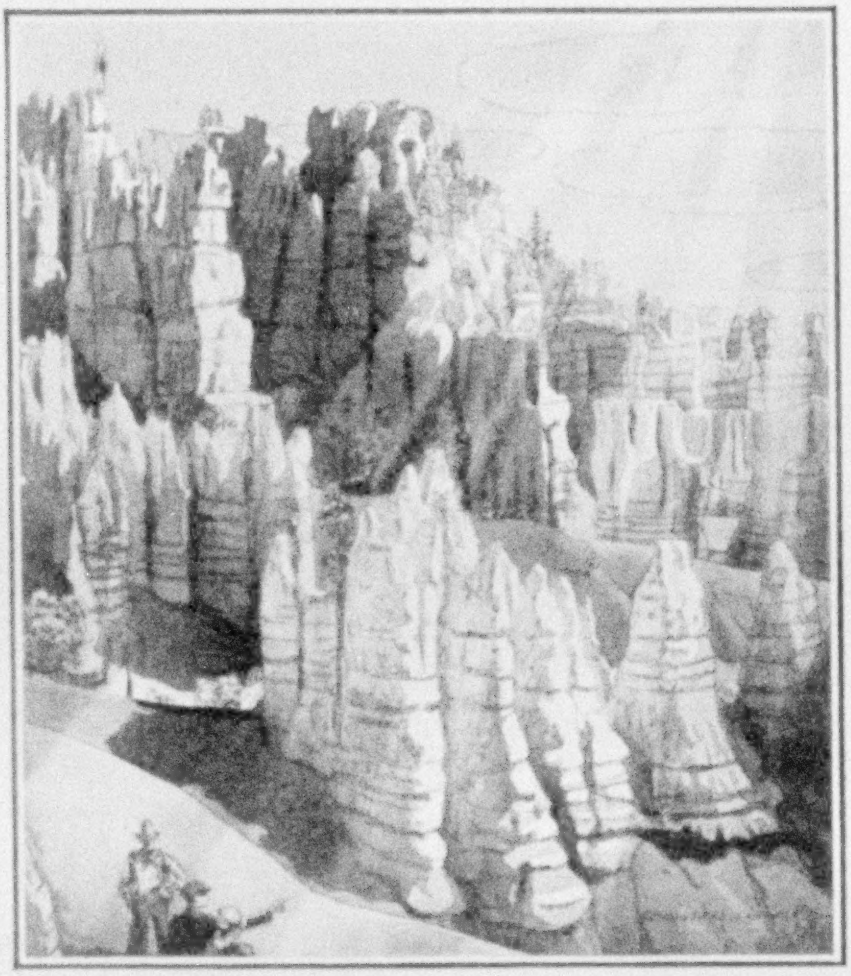
Bell & Howell Co.—Dept. D, 1817 Larchmont Ave., Chicago, Ill.—New York, Hollywood, London (B. & H. Co., Ltd.) Established 1907

Union Pacific



"Unka - timpie Wa - Wince Pock - ich"

(Bowl shaped canyon filled with red rocks standing up like men)



BRYCE CANYON
Our Newest
NATIONAL PARK

LONG before white men discovered Bryce Canyon, the Indians of Southern Utah looked upon it with awe and wonder. They called it Unka-timpie Wa-Wince Pock-ich—"bowl shaped canyon filled with red rocks standing up like men."

That expression, though vivid, scarcely begins to describe it! Nowhere else in the world has Nature played so fantastically, so colorfully with stone!

The great side walls are fluted like giant cathedral organs. Other architectural rock-forms tower upward in vast spires and minarets — marbly white and flaming pink. And high on painted pedestals stand human shapes, startlingly real. Figures of Titans, of kings and queens!

And yet, Bryce Canyon is *only one of five great wonderplaces* to be seen on this new exclusive Union Pacific tour. You see Zion Canyon as well—entirely different—no less thrilling! And as a climax, the Grand Canyon itself, the most colossal, most sublime chasm in the surface of the earth!

The trip requires only five days by motor-bus after leaving your Pullman at Cedar City, the gateway, with accommodations at handsome lodges. You can easily include it in a two weeks' vacation. You may go independently or on an Escorted All-Expense Tour with interesting companions.

The season is from June 1 to October 1. Send the coupon at once for richly illustrated booklets, and full details, including the low cost.

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Union Pacific System, Omaha, Neb.
Please send me complete information including cost, and booklet:
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Banff

Set the world's smartest hotel on a mountain ledge in a virgin spruce forest. Face it with a huge valley ended off by a gigantic wall of 9,000-foot snowpeaks. Below its formal terraced gardens, place a pale-green swimming pool . . . below that, shelving woodland walks . . . below these the falls, the rapids and a glacier-fed river. Through the valley, the red baked-clay tennis courts ...an 18-hole championship golf course. Up Sulphur Mountain, the trails where mountain ponies carry trail-riders to the top of the world . . . Then, you begin to have a picture of Banff Springs Hotel.

Visit Banff this summer . . . motor, golf, ride, swim, play tennis, climb mountains as you will . . . spend long hours in the lounge, merely watching the shift and sweep of cloud-shadows on that tremendous range of snow-mountains . . . be comfortable as only this baronial hotel can make guests comfortable. But, we warn you, make your reservations now. Even spacious Banff's 600 rooms are booked well in advance. Open May 15th.

An easy motor run from Banff lies Lake Louise, a chateau lying in banks of Iceland poppies on the lip of a pale-green lake . . . all against the backdrop of a living glacier.

One of the nicest things about both Banff and Louise is the variety of vigor from which you can choose. You can dally in gardens and lounges . . . or you can risk an adventurous neck on mountaineer trips . . . or anything in between. Information from Banff Springs Hotel, Banff Springs, Alberta, Canada; Chateau Lake Louise, Lake Louise, Alberta, Canada; or any Canadian Pacific Office: New York, 344 Madison Ave. . . . Chicago, 71 E. Jackson Blvd. . . . Montreal, 141 St. James St. . . . 30 other cities in U. S. and Canada.

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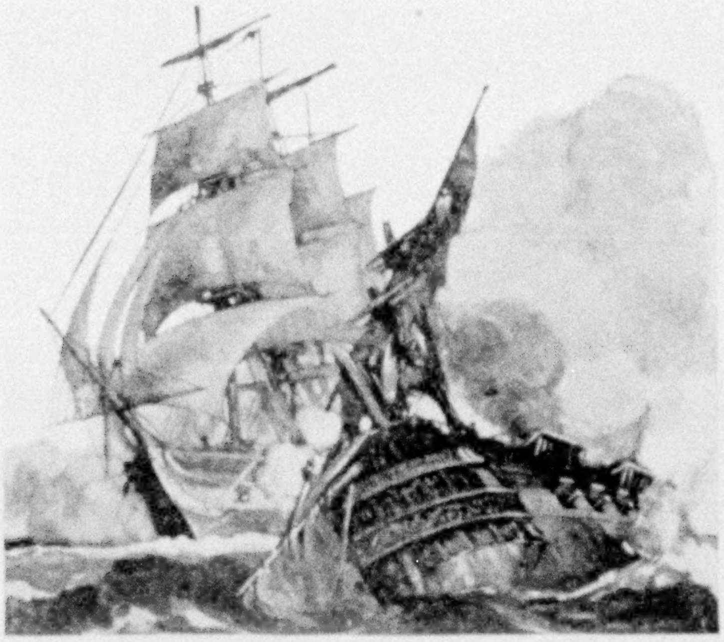
World's Greatest Travel System . . EMPRESS LINERS TO EUROPE AND ORIENT . . CRUISES . . TRANS-CANADA LIMITED . . BANFF . . CHATEAU FRONTENAC

"OLD IRONSIDES"

proved it long ago



SIMON WILLARD BANJO CLOCK, $115

Other models—$25 to $400

ON August 19, 1812, the American frigate, Constitution, sighted the crack British frigate, Guerriere, 200 miles east of Boston. "Old Ironsides" bore down on her at once. Captain Hull held his broadside until within pistol shot. The sea was rough but the American aim was deadly. A half hour later the Guerriere was a dismasted sinking hulk. All damage on "Old Ironsides" was repaired in an hour.

"OLD IRONSIDES"—132 years old as she now rests in Boston Harbor—was the greatest fighting ship of her time because her builders chose to make her so. Today, those same principles are being employed in making the Sangamo Electric Clock. We have deliberately built this superb clock to a higher timekeeping standard than clocks have achieved before.

Like the modern radio, Sangamo is electrically operated. A tiny motor built in the movement winds the clock automatically-perpetually. This produces a uniform spring tension resulting in unvaried accuracy undreamed of in the old-fashioned key wind clocks. Sangamo's marvelous timekeeping qualities can be compared only with those of the finest railroad watches.

There is nothing complicated about Sangamo. Current fluctuations do not affect it. Even with all current cut off, it will run for many hours. And Sangamo quality extends to every hidden part. You will find it in the mirror-like polish of the pivots—in the accurately cut gears—in the jeweled Illinois-Hamilton escapement.

Sangamo Electric Clocks are offered in 45 styles and color designs at from $25 to $400. You can see them at any of the better jewelers'.

Write today for your free copy of "Telling Time" showing masterpieces of the famous old clock makers as well as the latest styles in clocks.

Large print in colors of this "Old Ironsides" painting suitable for framing will be sent on receipt of 10 cents.

At Better Jewelry Stores

SANGAMO
ELECTRIC CLOCK

SANGAMO ELECTRIC COMPANY, Springfield, Illinois

Foreign factories: Canada: Sangamo Electric Co. of Canada, Ltd., Toronto
England: British Sangamo Co., Ltd., Ponders End, Middlesex, England

Manufacturers also of Sangamo Electric Meters—5,000,000 in service—
Sangamo Radio Condensers and Transformers

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The Cabin Way to Europe...

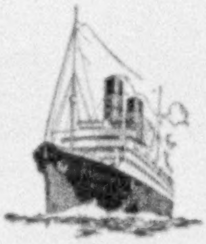
by the largest cabin fleet

Pleasure travel, once the privilege of the very rich, is now well within the means of every reasonable budget.

Seventeen Cunarders...the largest cabin fleet afloat... provide fast and frequent sailings to Europe. Great modern ships, generous in every detail of service and attention... conservative in price. Three sailings a week from New York, Boston or Montreal.

Bright, cheerful, modern and very comfortable Tourist Third Cabin accommodations on all these ships.

Your trip will be exceptionally delightful if you sail before the rush season begins in mid-May or after it is over in late July. There is more charm, more real enjoyment both afloat and ashore at those times. Rates: Cabin $145 up; Tourist Third Cabin $102.50 up.

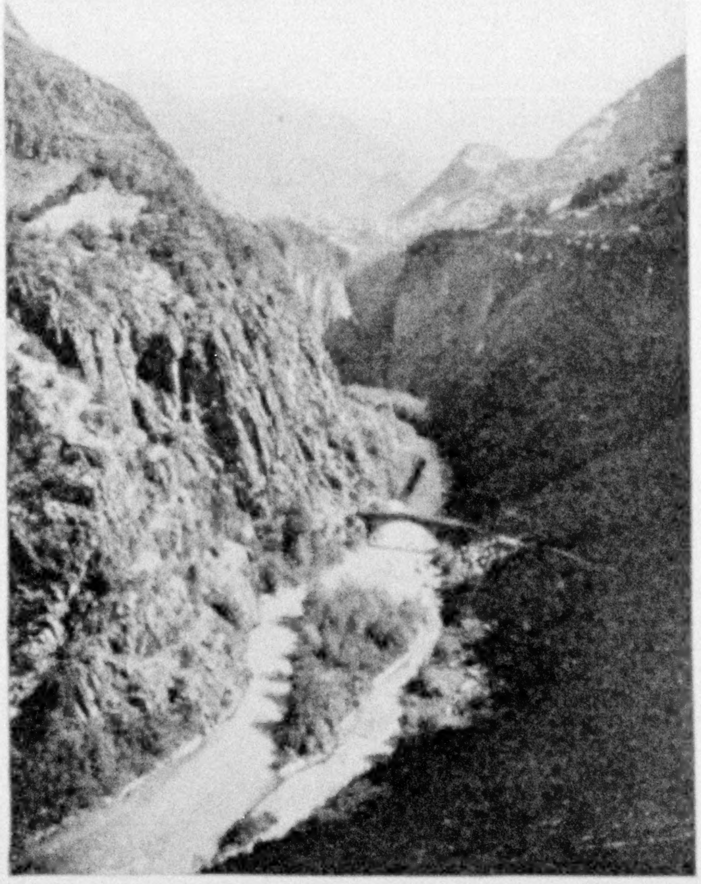


CUNARD LINE

See Your Local Agent

THE SHORTEST BRIDGE TO EUROPE

France



What would you know of America...if you'd only seen New York?....By train...by autobus...this year, see France!...Take the *route des Vosges*, cool even in summer...forests, sky-high pastures, snow-peaks on the horizon....Or the *route de Jura*... gorges, cascades, tree-covered plateaus with vine-yards smiling on the western slopes....Travel through Brittany...witness a *pardon*, understand the sea.... Slip down the Loire Valley and recreate the splendor of Old France from those magnificent chateaux ....Make the rounds of the smart "cures" in Auvergne and know the secret of the chic Parisienne's verve....Visit the Gorges du Tarn...grottoes and rivers underground, the thrilling passage on a rushing stream between colossal cannon walls.... Cross the Alps, Napoleon-wise...passes, lost villages, stupendous glimpses valley-ward, lone churches, set so high their spires touch heaven....Take the Pyrenees in your stride...glaciers and peaks, aerial resorts of super smartness all year 'round....Skirt the Mediterranean, flitting from one gay beach to the next along the Grande or the Petite Corniche...or on to Corsica in the blue Mediterranean.

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Ready for 7665 women—the story of
FROMM *Pedigreed* SILVER FOXES

BE SURE to get this Medallion with the scarf you buy. Mail to Fromm with your name and address—and receive a certificate—describing the scarf you have purchased and stating its exact pedigree.

THIS SPRING, seven thousand six hundred and sixty-five women will be the proud possessors of Fromm Pedigreed Silver Fox scarfs. And only this number can possess them—for this year's crop of carefully selected, scientifically bred foxes amounts to only seven thousand six hundred and sixty-five pelts. Each of these pelts is a masterpiece in soft, full, perfectly marked, silky fur. To possess one is to possess the finest—but you must act quickly to be sure to be among the fortunate few. We have prepared a fascinating story about the Fromm fox ranches in northern Wisconsin—telling how years of scientific breeding have produced a strain of silver fox superiority instantly apparent to the expert's eye. Send, today, for this free booklet, which also tells you how to care for your silver fox scarf. Use the coupon—giving us your furrier's name—and we will assure you of the opportunity of being one of the seven thousand six hundred and sixty-five exclusive possessors of a Fromm Pedigreed Silver Fox Scarf. Fromm Bros., Nieman & Co., Thiensville, Wis.

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Thiensville, Wisconsin G-4-29

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Send me booklet on Fromm Pedigreed Silver Foxes. This entails no obligation on my part. My furrier is

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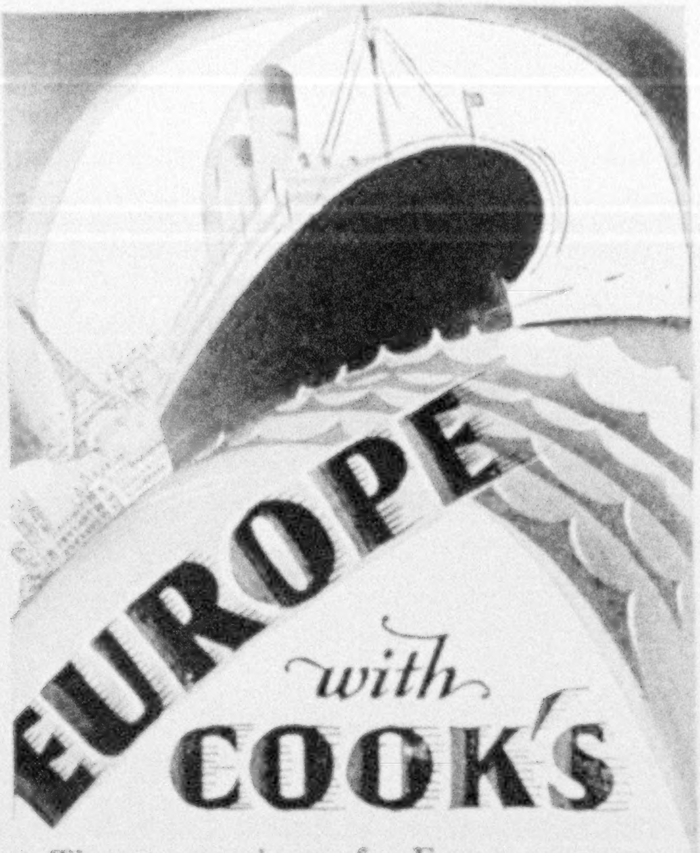

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Step ashore at Southampton, right into the midst of centuries-old pageantry. A biscuit's-throw away . . . the great New Forest, with its thousand year old oaks . . . hunting ground of Rufus Redbeard. Beaulieu Abbey built by the Infamous John, from whom the nobles squeezed the Great Charter. Wareham, burial place of the murdered boy king Richard II. Mysterious Stonehenge, as ancient as the moon.

There's a dewy freshness about the Thames Valley and an incomparable charm about the entire countryside which blends ideally with the substantial hospitality of England.

Thirty-five Round Tours have been specially prepared for Americans. What best to see, where to go — without wasting time.

Guide No. 71, containing full information, gladly sent on request

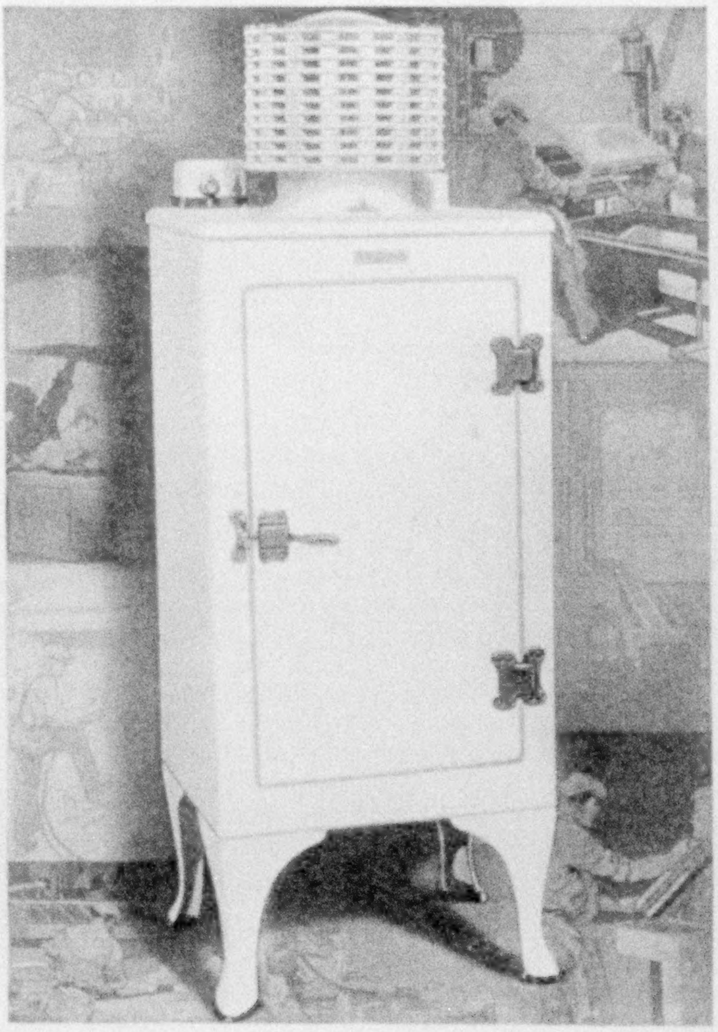
K. W. C. GRAND, *Gen. Agt.*, 505 Fifth Ave., N. Y.

GREAT WESTERN
and
SOUTHERN
Railways of England

General Electric presents

the first

All-steel Refrigerator

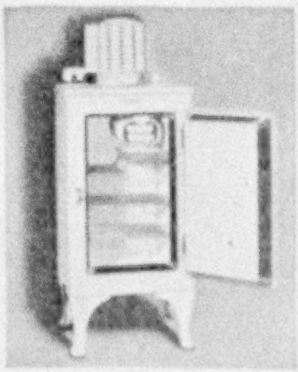


A new small-family model at the very low price of

$215

ANOTHER chapter has been added to the achievements of the engineers and scientists of the General Electric Research Laboratories. The same group of men who perfected the simplified hermetically sealed mechanism of the General Electric Refrigerator, have now designed and built the first all-steel refrigerator cabinet.

NEW DESIGN—MADE IN A NEW WAY . . . General Electric has made a large investment in new machinery. Giant presses had to be designed and built to cut the steel, bend it into shape and weld together the folded forms. But it has achieved its purpose. Its aim was, by mass production, to build the best refrigerator ever produced and offer it to the small families of America at a price easily within their reach—$215 at the factory.



All steel, with electrically welded joints. Heavy hardware, bolted into the steel. Black faced door edges, self-closing latch, gliders to protect linoleum, and many other features.

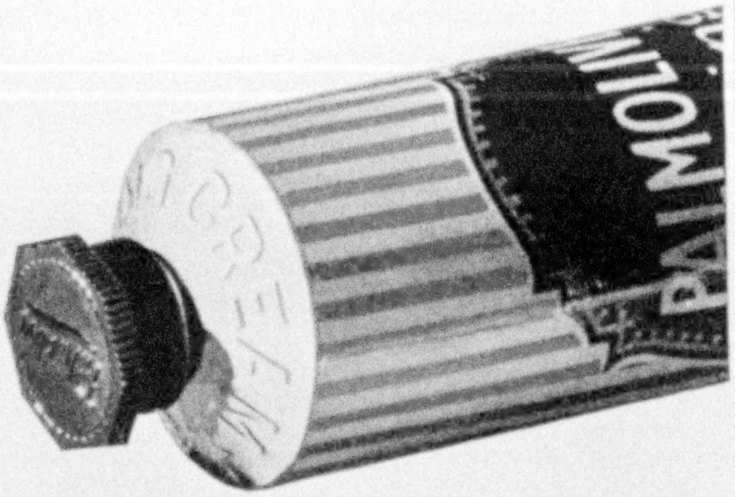
$215—WITH CONVENIENTLY SPACED PAYMENTS . . . The new all-steel General Electric makes safe refrigeration possible for every home. Only a small down deposit is required—the balance on time.

FIRST PUBLIC SHOWING MARCH 22 . . . On display by dealers everywhere on and after Friday, March 22nd. Be sure to be among the first to see it. Write for a descriptive booklet to Sec. R-4 Electric Refrigeration Department of General Electric Company, Hanna Building, Cleveland, Ohio.

GENERAL ELECTRIC

ALL-STEEL REFRIGERATOR

It's a Gift



Men, it's yours for the asking. Mail the coupon for generous 7-day sample. It will prove a revelation in shaving comfort.

GENTLEMEN: Our success is based on the approval, *each morning*, of a million men. If we fail to please them, if our quality is relaxed ever so little, we lose friends. And friends, we have found, are our best asset.

We gain these friends by a unique offer. Before we ask you to buy our remarkable shaving cream, we first offer it to you for a week's test free. Men who customarily never mail coupons, send this one in.

And 86% of those who try Palmolive Shaving Cream become staunch supporters for it. They make claims that we would hesitate to print. Their enthusiasm is supreme. Won't you let us send you a sample now that you may have seven delightful shaves at our expense? That will prove our case one way or the other. You be the judge. Just mail the coupon.

These 5 superiorities

Palmolive Shaving Cream came as the result of years of experiment. 129 formulas were rejected before we embodied, all in one preparation, the things 1000 men had said that others failed in.

1. Multiplies itself in lather 250 times.
2. Softens the beard in one minute.
3. Maintains its creamy fullness for ten minutes on the face.
4. Strong bubbles hold the hairs erect for cutting.
5. Fine after-effects due to palm and olive oil content.

Perhaps your present shaving method satisfies, and yet there may be a better way. In fairness to yourself—and to us who undertake to please you in one week—won't you mail the coupon now for the test we offer?

PALMOLIVE RADIO HOUR—Broadcast every Wednesday night—from 9:30 to 10:30 p. m., eastern time; 8:30 to 9:30 p. m., central time; 7:30 to 8:30 p. m., mountain time; 6:30 to 7:30 p. m., Pacific time—over station WEAF and 39 stations associated with The National Broadcasting Co.

To add the final touch to shaving luxury, we have created Palmolive After Shaving Talc—especially for men. Try the sample we are sending free with the tube of Shaving Cream.

1789

7 SHAVES FREE

and a can of Palmolive After Shaving Talc

Simply insert your name and address and mail to Dept. B-3041, Palmolive, 595 Fifth Avenue, New York City.

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(Please print your name and address)

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Circular Tours arranged by the London Midland and Scottish Railway of Great Britain will take you to places of interest throughout the length and breadth of the land.

On your way to the Trossachs and the Scottish Lochs you can stop off at Stratford-on-Avon—full of Shakespeare memories—and visit Harvard House, the ancestral home of John Harvard. Another tour can take you through the lovely English Lakeland, and another through the wonderful scenery of North Wales, starting from the old-world city of Chester.

These are but a few of the many L M S Circular Tours, each full of absorbing interest, each conducted with speed and efficient service.

Illustrated pamphlets from T. R. Dester (Dept. A-74), London Midland and Scottish Railway of Great Britain, 200 Fifth Avenue, New York. Or from any L M S agent, Thos. Cook & Son, or the American Express, Inc.

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OUR HOME BUDGET SHEET is designed to cover one month's record of income and outgo.

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Please send me FREE copy of the John Hancock Home Budget Sheet. (I enclose 2c. to cover postage.)

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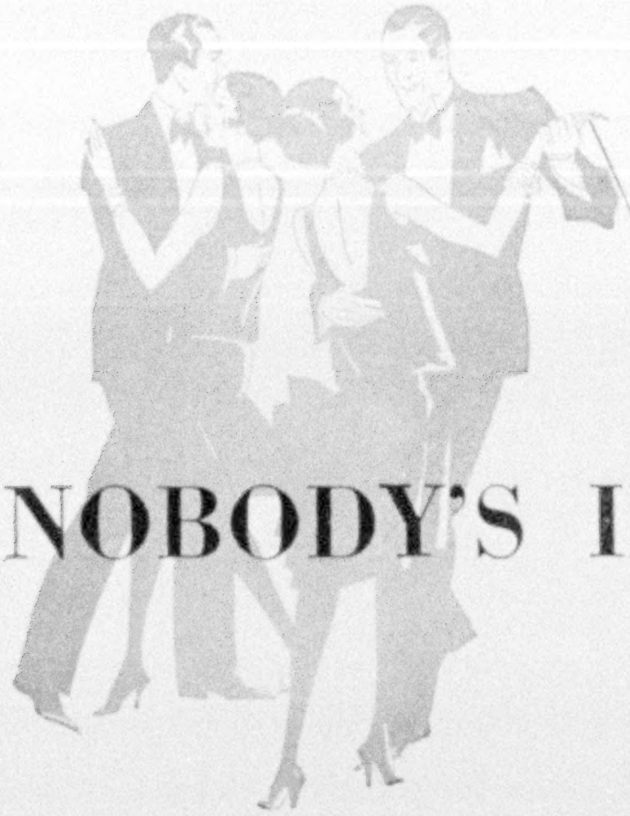
N. G.

OVER SIXTY-FIVE YEARS IN BUSINESS

Even when teeth are white



NOBODY'S IMMUNE*

*4 out of 5 Neglect the Gums and Surrender Health to Pyorrhea

DANGER seems so remote when teeth are white. But, as your dentist will tell you, teeth are only as healthy as the gums. And diseases that attack the gums seldom reveal their presence until too late. Once they get a good foothold in the mouth only expert dental treatment can stem their advance.

So start taking proper care of the gums to preserve teeth and safeguard health from dread Pyorrhea—the disease of neglect that ravages 4 persons out of 5 after forty and thousands younger.

Every morning and every night, when you brush your teeth, brush gums vigorously with the dentifrice specifically made for this purpose—Forhan's for the Gums.

Within a few days you'll notice an improvement in the way your gums look and feel. In addition, your teeth will look cleaner and whiter. For while this dentifrice helps to firm gums and keep them youthful (the surest safeguard against Pyorrhea) it also cleans teeth and protects the crevices where decay so often begins.

Your surest safeguard against disease is a semi-annual visit to your dentist and the daily brushing of teeth and gums with Forhan's.

Get a tube of Forhan's from your druggist today. Two sizes—35c and 60c. Start using it, morning and night. Teach your children this good habit. It will protect their health. Forhan Company, New York.

Forhan's for the Gums is far more than an ordinary toothpaste. It is the formula of R. J. Forhan, D. D. S. It is compounded with Forhan's Pyorrhea Liquid used by dentists everywhere. You will find this dentifrice especially effective as a gum massage if the directions that come with each tube are followed closely It's good for the teeth. It's good for the gums.

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See the most attractive of our National Parks on one trip—the Rock Island's Grand Circle Tour of the Scenic West, including—

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All For One Low Round Trip Fare Stopover Anywhere

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Rock Island Vacation Travel Service Bureau, 746 La Salle Street Station, Chicago, Ill.

Please send me free booklets describing ☐ Colorado, ☐ Yellowstone, ☐ California, ☐ All-Expense Colorado Tours (check book or books desired); also full information regarding train service and low summer fares.

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—and then YOSEMITE!

First among all California vacations—Yosemite National Park!

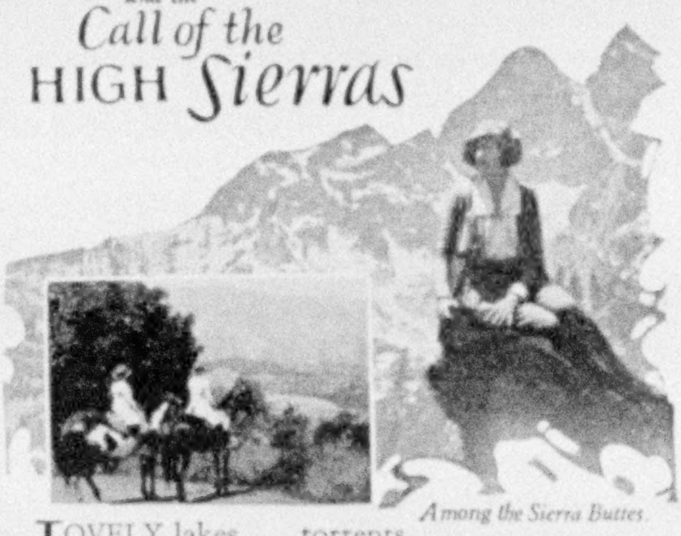
On your way, you can see the famed Mariposa Grove of Big Trees—where a motor stage takes you *through* the giant Wawona Tree shown above. All-expense Tours, for from \$30 to \$76.75, cover 2 to 4 days in the Park. Accommodations at Housekeeping Cabins, Trail Camps, comfortable Lodges, or the luxurious Ahwahnee, California's finest resort Hotel. Ask your travel agent, or write to Yosemite Park and Curry Co., Yosemite National Park, California.

CALIFORNIA'S FOUR-SEASON WONDERLAND

Alameda County — the Center of Scenic California

and the

Call of the HIGH Sierras



Among the Sierra Buttes

LOVELY lakes . . . torrents roaring through mighty forests or granite chasms . . . majestic, glaciered peaks, glistening to the touch of sunrise, or brooding in mystery against the splendor of sunset—the grandeur of the High Sierras ever lures the traveler. Few know that in 3500 square miles of the more rugged portion of California there are 145 peaks over 11,000 feet high, while in all of Switzerland's 13,500 miles area there are but 115 of such height.

Paved highways and good mountain roads bring most of this vacation wonderland within but a few hours' drive of the principal cities of Alameda County.

Plan now to visit Scenic California from the metropolitan area on the eastern shore of San Francisco Bay.

For further information write

OAKLAND Chamber of Commerce

Request Booklet 15

OAKLAND · California

Discover this summer

why so many have chosen *to live in*

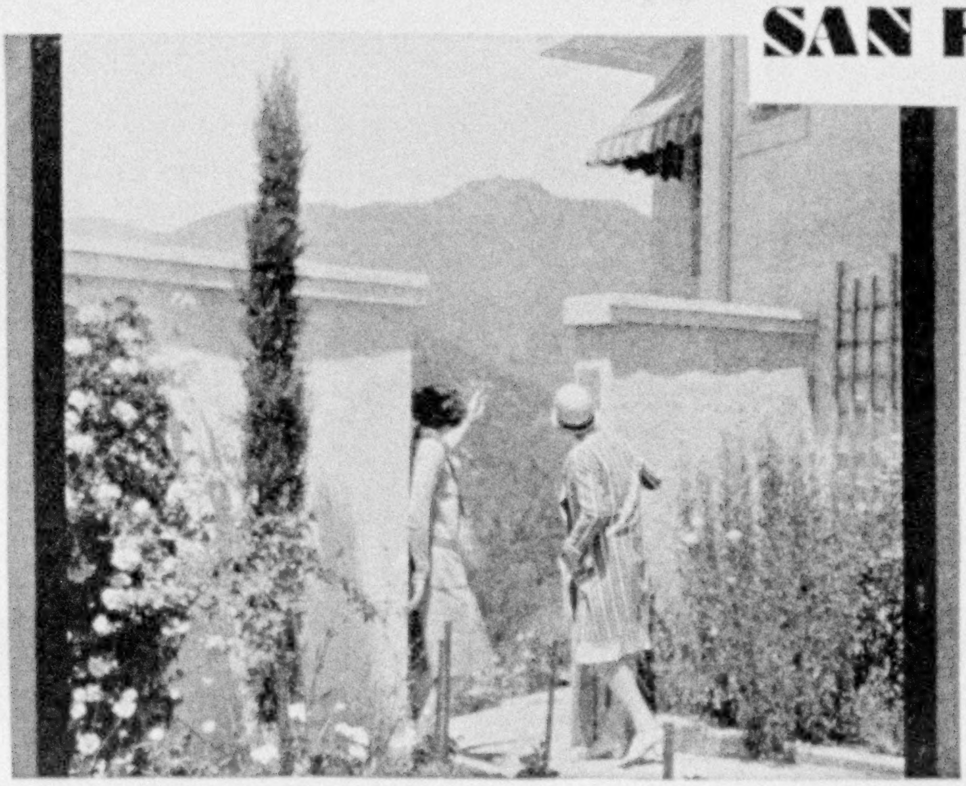
CALIFORNIA*

From every corner of the nation they have come, first to see, then to live. For California has been settled by those from other sections. It is new country. It lures countless thousands. Why not see this summer what it offers you?

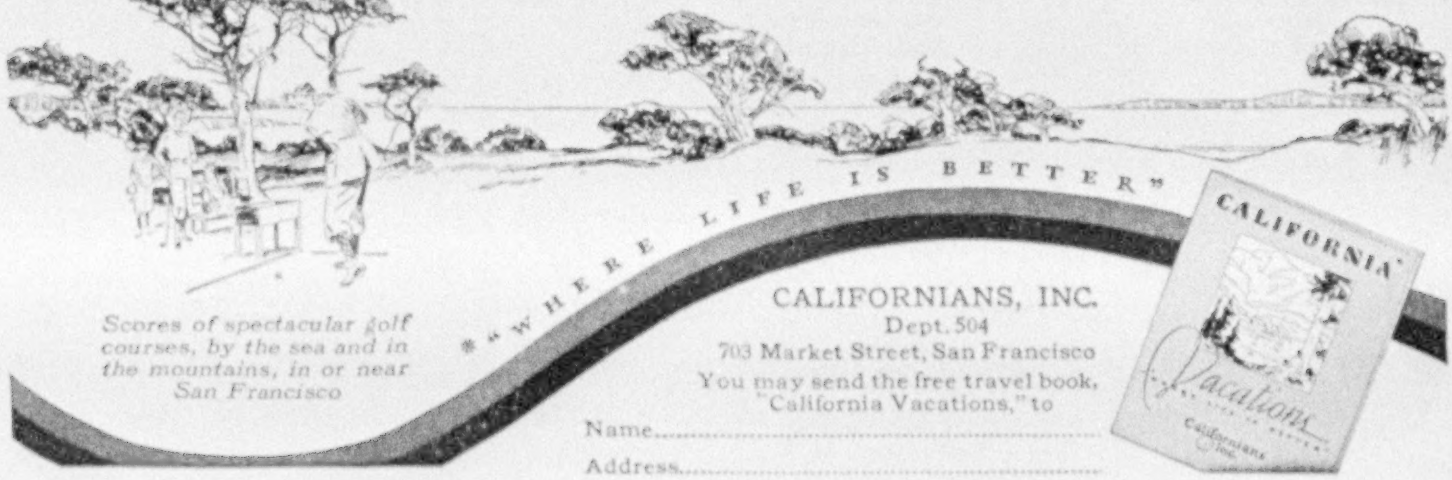
From the rugged background of the High Sierra to the foamed-tipped crests of the inrushing sea is a land that offers joy of living. Here is Monterey, first capital of California, Del Monte and Carmel-by the-Sea. Over there is Yosemite, cupped from solid granite to make a playground. Giant Redwoods, oldest living things on earth, lift their shaggy heads above comfortable inns and a thousand glorious camp sites. Sports of every kind—trout streams, golf courses, in the mountains and by the sea, tennis courts that have reared more than a few champions, peaks that are ascended by motor car for mile-high views and peaks that try the hardiest veteran climbers. You select your summer climate as you do your sport, all are here.

You may find opportunity, too. Others have. You may decide to live "where life is better." If so, your vacation will have served a double purpose. Can a vacation offer more? Come this summer to

SAN FRANCISCO



Here is America's coolest summer city and headquarters of a marvelous vacationland. Central gateway to the whole Pacific Coast. Its average summer temperature is 59° and no summer rain to mar your plans. Cosmopolitan, world port with the largest Chinatown outside of China. A city where art and music find deep appreciation. Smart shops, fine hotels, gay restaurants. And in every direction railroads and highways leading to scores of scenic playgrounds that make this state the nation's summerland. You may have an illustrated travel book, describing this California vacationland by writing to Californians, Inc., a non-profit organization whose sole purpose is to serve you and other guests of California. It is free.



Scores of spectacular golf courses, by the sea and in the mountains, in or near San Francisco

CALIFORNIANS, INC.
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You may send the free travel book, "California Vacations," to

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A Garden Full of Gladioli

The Most Popular of All Summer-Flowering Bulbous Plants

For a number of years we have been offering a collection of 50 Gladioli Bulbs and have sold millions of them, receiving numerous testimonials as to their merits. This year we are also offering a choice collection of named varieties for those who wish to plan their garden according to a color scheme. All bulbs produced under expert supervision on our own Farms.

Special Collection No. 1

For Two Dollars we will send **50 Bulbs** of our **Grand Prize Mixture,** which covers every conceivable shade in the Gladiolus kingdom.

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For Five Dollars we will send **10 Bulbs each of 10 choice named varieties,** separately labeled (100 bulbs in all), of the following:

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Order Your Bulbs Now

so as to have them to plant when you begin your garden.

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Mail your order with Check, Money Order, Cash or Stamps, mentioning this advertisement, and bulbs will be sent prepaid to your home anywhere in the United States.

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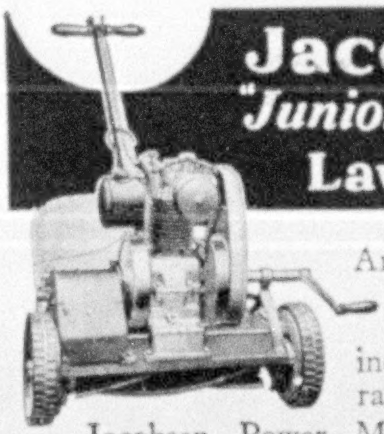
Jacobsen "Junior" Power Lawn Mower



America's foremost small power mower. It cuts a 19-inch swath at the rate of 3 acres a day.

Jacobsen Power Mowers are quality built, speedy, powerful and efficient. There is a type for every lawn from ¼ acre up. They earn their cost in time and labor saved and create a healthier, more beautiful turf. Used and endorsed from coast to coast. Below is pictured the Jacobsen "Estate" Power Mower on a famous German estate. European gardeners prefer this fine roller-type mower to the prominent European mowers.

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3-29

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Martin House of 48 Rooms

by putting up houses built to fit the needs and habits of each little tribe. Enjoy seeing and hearing the beautiful little song birds singing or working in your garden, hunting the cutworms, bugs, moths, caterpillars and other annoying insects which devastate your choice trees, shrubs and flowers. Martins feed from the air and each one destroys thousands of mosquitoes every day.

They Are Looking for Homes

Wren House

and your thoughtful provision of the kinds of homes they like, water to bathe in and some simple foods they crave will bring multitudes of beautiful and useful song birds to your garden year after year.

DODSON scientifically designed and artistic bird houses are a feature in the most beautiful estates, country clubs and parks all over America. They are in a class by themselves on account of their superiority in design, material and workmanship. Sold only direct at prices even owners of modest homes can well afford.

FREE This fascinating book, "Your Bird Friends and How to Win Them," sent to anyone who loves our beautiful song birds. It illustrates, describes and gives prices on all styles of bird houses, shelters, bird baths, special foods, etc. Mailed free on request.

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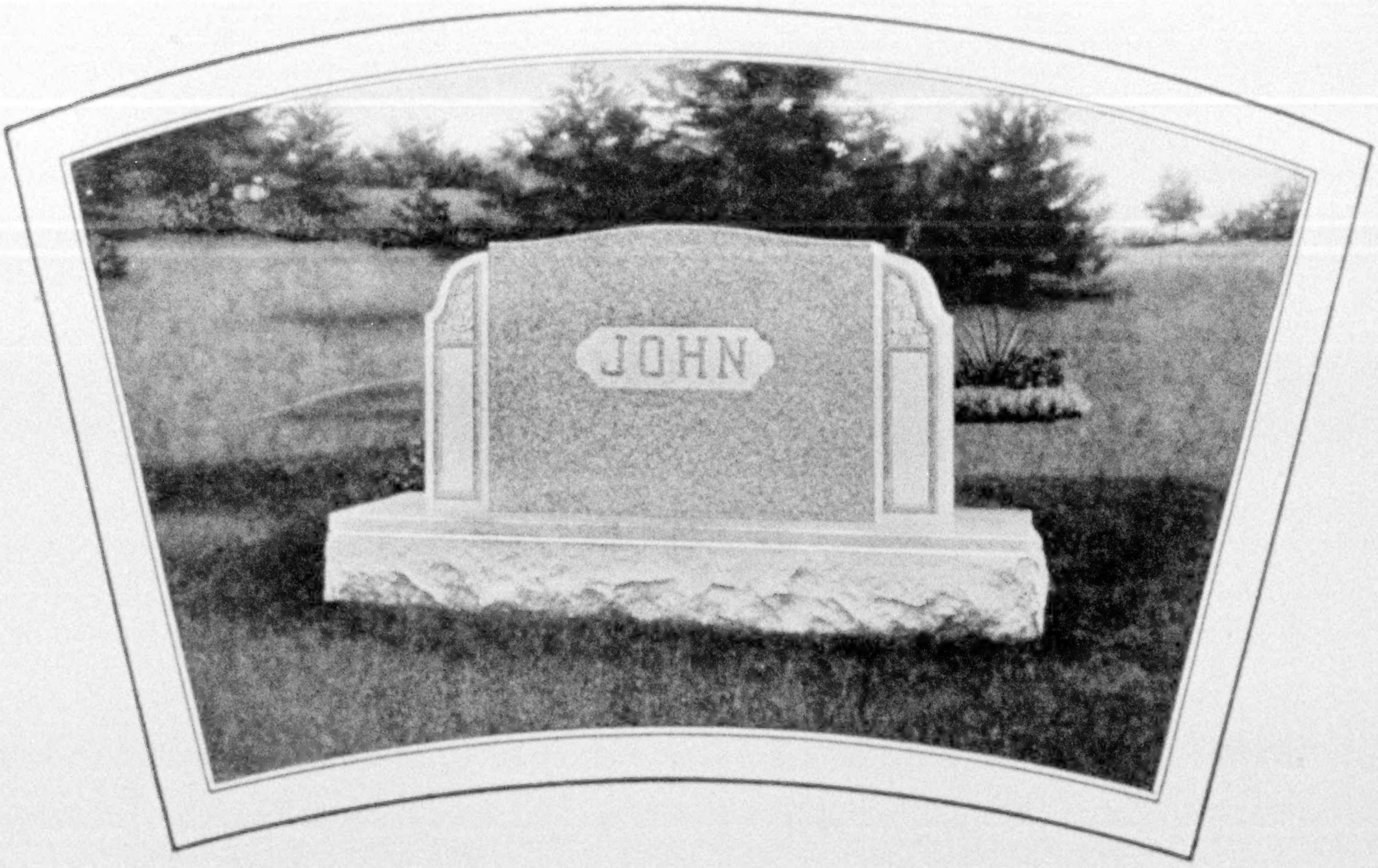
404 HARRISON STREET KANKAKEE, ILL.



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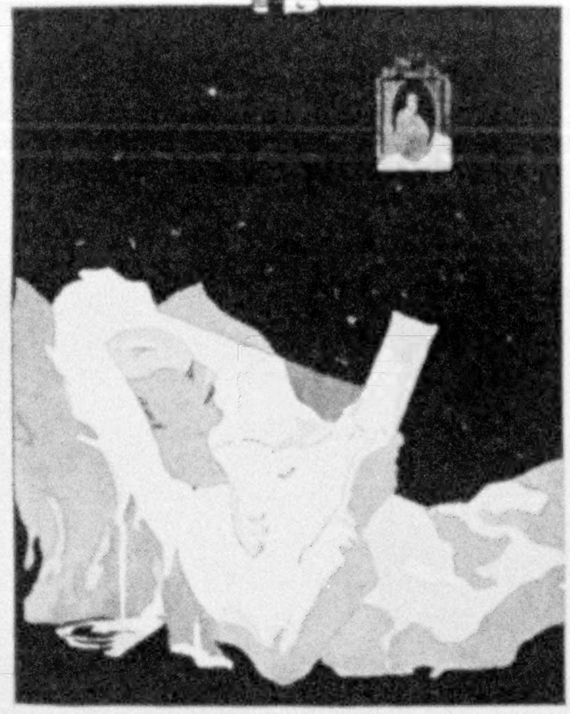

The Book-Cadillac Hotel

ON WASHINGTON BOULEVARD
THE STREET OF FINE SHOPS

DETROIT

GOOD NIGHT

Snug in bed. The world locked out. He sinks under great disorderly billows of clean, warm and white sheets, sheets piled over with woolly, warm blankets and he turns and turns and sings and dreams and whistles and smiles and *reads in bed.* He hasn't turned out the light, *yet;* they say men don't, usually, until they've prolonged pleasant ways, until they've nibbled and savoured the soft, sleepy beds, like a cake. The beds *are* wonderful beds. ‹ ‹ ‹ The wise of earth, the cosmopolite, *youth,* ineffable lovely women, Statesmen, men who dream in millions, writers, actors, painters, *these* are our guests, these your neighbors. Come, when you can, for it is all interesting, so pleasant, and the beds are so soft, restful, and they're as *sleepy* as a *winter's night.* See you soon? *Good night!*

THE BOOK-CADILLAC HOTEL

Carl M. Snyder, Managing Director

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Tour prices include round trip ocean passage; transportation through Europe by rail, steamer and motor; good hotel accommodations; excellent meals; sightseeing programs; admission to galleries and museums; services of English-speaking couriers and guides; transportation of baggage and all tips abroad.

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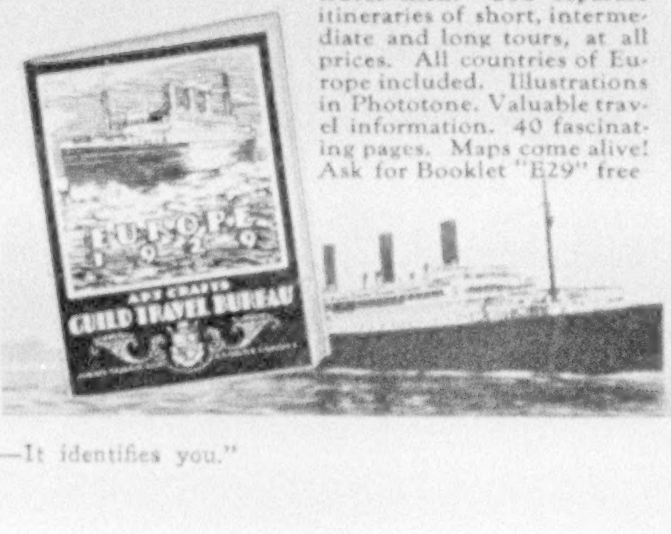

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Among prominent persons and institutions served by the Davey Tree Surgeons are the following:

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THOMAS MEIGHAN
CHARLES M. BIDDLE, JR.
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MRS. ANNA ROOSEVELT COWLES
WASHINGTON AND LEE UNIVERSITY
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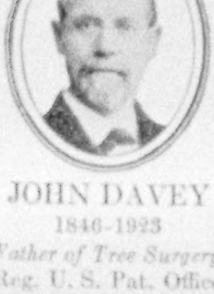


JOHN DAVEY
1846-1923
Father of Tree Surgery
Reg. U. S. Pat. Office

If your tree is sick you can trust Davey Tree Surgeons

Suppose you go out and look YOUR trees over. You may be surprised at the things that can be seen, even with untrained eyes. You wouldn't lose your trees, of course. But perhaps you didn't realize that trees can be sick and can die just like any other living thing.

Is some beautiful tree dying back at the top? Perhaps it is starving. Or it might have a disease or insect infestation; maybe it is being strangled by girdling roots. Possibly it is being drowned, or perhaps dying from thirst. Or maybe it is smothered by a fill of heavy soil, or is being poisoned by leaking gas.

Are the leaves of some priceless tree a sickly yellow; are they turning brown along the edges or in spots; are the leaves thin or sparse; is there an absence of dark green foliage?

Are there any large dead limbs which are likely to fall and hurt someone? Any weak, splitting crotches? Any decaying cavities, in which disease is eating out the internal cell structure? Davey Tree Surgeons are trained to correctly diagnose tree troubles and to use the proper treatment for each particular ill.

Write or wire for free examination of your trees. Davey Tree Surgeons live and work in your vicinity. Branch offices with telephone connections in principal cities from Boston to beyond Kansas City, from Canada to the Gulf.

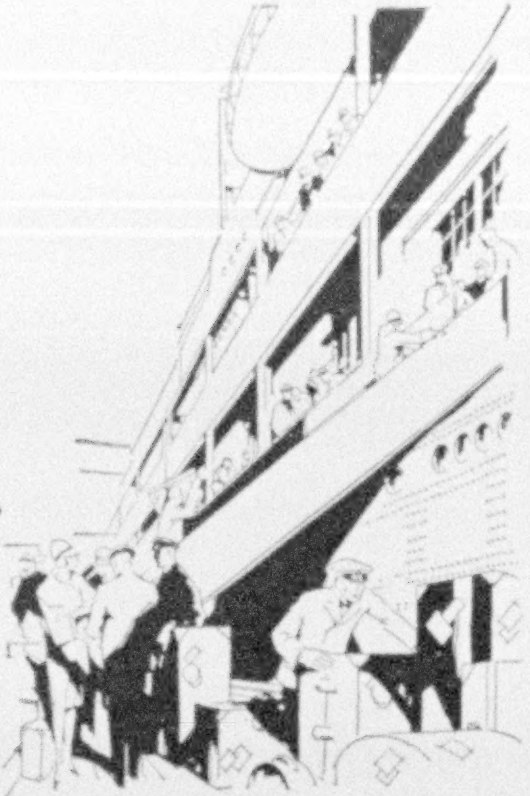
THE DAVEY TREE EXPERT CO., Inc., 238 City Bank Bldg., Kent, Ohio

Send for local representative to examine your trees without cost or obligation

DAVEY TREE SURGEONS

MARTIN L. DAVEY, *President and General Manager*

EUROPE



What will your trip be like?

Will it be a failure or the successful realization of your fondest hopes? Will you return utterly disappointed or amazingly exhilarated by all the joys you have experience abroad?

The thrills and sights are always there, but it is the way you travel that counts. When you join an American Express Escorted Tour you become part of a delightful group for whom Europe is a great adventure. You follow a pleasure path mapped out for you in advance. No travel worries to bother you, to cause delays; no troubles with reservations, tickets, meals en route, baggage—only carefree vacation days packed rich with comfort and excitement... under the guidance of an experienced Tour Manager.

Send for any of the booklets listed below. They will supply you with the information which every prospective traveler should know.

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(B)

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Please send booklets giving details of the tours checked
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Always Protect Your Funds

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28 ranges of mountains

1406 miles of scenic rivers

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A New Mountain Playground

Out West in the Cascades, near the sea —an Alpine wilderness of glistening peaks and glaciers, rushing streams, blue lakes, forests high above the rush of the world!

In Heather Meadows, between Mt. Shuksan (9,038 ft.) and Mt. Baker (10,827 ft.) a most inviting modern chalet has been built —Mt. Baker Lodge. Here you can have a sky high vacation! Swim, ski, fish for trout, toboggan, ride horseback, climb mountains—or simply rest and enjoy the spectacular scenery.

Mt. Rainier may be included easily in this trip.

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Mail this coupon to E. E. Nelson, Pass. Traffic Manager, 33 Northern Pacific Building, St. Paul, Minn.

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Books or Trips I am interested in (√)	Round Trip Summer Fare from Chicago
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☐ Rainier Park	90.30
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Name

Address

My telephone No. is

If student, state grade 230

"North Coast Limited"—The Train West!

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in 10 *Years*

THE present hour sees a great change taking place in business. Small businesses are being gathered together into great institutions. The position of Vice-President in charge of Production, or Sales or Finance, in one of these great institutions is a larger responsibility than the presidency of a small business used to be. There has come an increasing demand for an expansion of the Institute's program to meet these changed conditions.

Beginning immediately, therefore, we shall offer to business executives a four-fold service, incorporating the results of two years of work with leaders of business management and business education. From this four-fold service, executives may now choose any one of the following courses, depending on their own particular business requirements:

1. The Complete Course and Service for General Executives
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THIS enlarged program is too important and far-reaching to be set forth in an advertisement. Its value to executives is admirably summed up in the words of Percy H. Johnston, President of the Chemical National Bank of New York, who considers it "the most significant step taken in business education in the past ten years."

We have prepared a special booklet describing the entire program, with particular reference to the new features. We should like to circulate this widely and to the following groups of men:

—*The heads of businesses* who recognize that the training of competent associates is their major problem.

—*Executives* interested especially in Marketing, Production and Finance, who want to concentrate their efforts along one of these branches of business.

—*Younger men* who desire definite training in the management of the particular departments of business in which they are now engaged.

For convenience, a coupon is provided below. We invite you to inform yourself on this great forward step in business education by mailing it at once.

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Please send me the facts about the Institute's new four-fold service

Name...Position.............................

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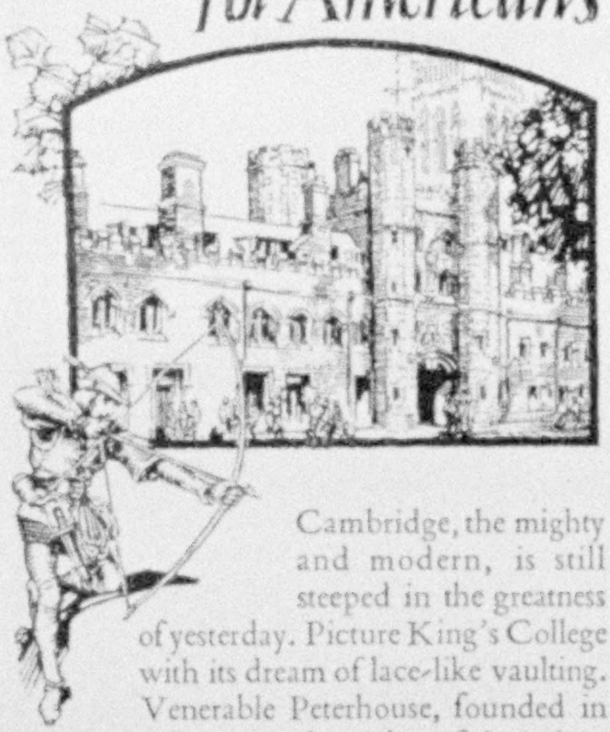
In Canada, address the Alexander Hamilton Institute, Ltd., C. P. R. Bldg., Toronto

Cambridge
a Glorious Adventure for Americans



Cambridge, the mighty and modern, is still steeped in the greatness of yesterday. Picture King's College with its dream of lace-like vaulting. Venerable Peterhouse, founded in 1284. Emmanuel, mother of American universities, which sent seventy sons to Winthrop in America.

Imagine the loveliness of the Tudor and the Renaissance—at their best in Cambridge; the gentle sloping lawns; the world renowned river Cam; great old trees... bathed in a golden sun.

Then leisurely wander to enchanting Ely, the home of the Watchful Hereward; to Wondrous Peterborough, to Sulgrave of the Washingtons; to Norwich, Lincoln, York and Durham. The entire East Coast of England is a paradise of excursions intensely interesting to Americans.

Cambridge will more than repay a visit. Write for the free illustrated booklet No. 64, giving full details and information.

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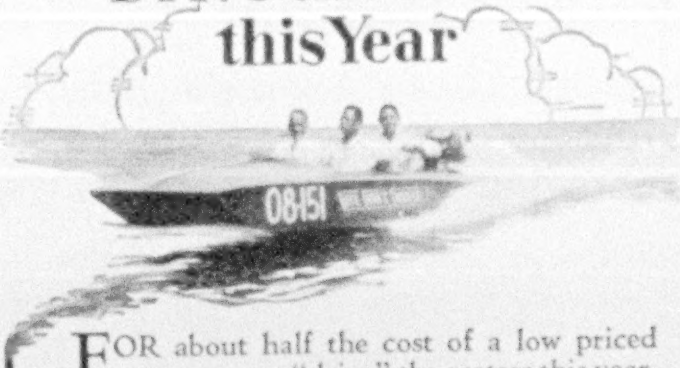
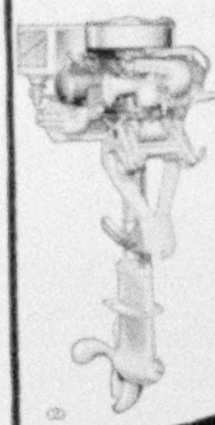
London
and North Eastern
Railway
OF ENGLAND AND SCOTLAND

"Drive" the Waters this Year



FOR about half the cost of a low priced car you can "drive" the waters this year.



It's more fun than flying, with a powerful, smooth running Evinrude at the stern of a sleek, trim runabout! Room for the whole family. Away from crowds, traffic.

Four *twin-cylinder* Evinrudes to choose from—20, 14, 6 and 2½ H. P., with light weights of 95, 75, 58 and 44 lbs., respectively. A size for any craft from canoe to small cruiser. Waterproof ignition, easy starting made still easier, torpedo-streamline and many other new 1929 features fully described in new Evinrude Year Book. *Send for free copy today.*

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Red E Power Lawn Mower

Does three to six times the work of man with hand mower—at low operating cost—runs close to walks, drives, buildings and shrubbery. Just right for lawns, estates, parks, schools, cemeteries and institutions.

Simple — Sturdy — Quiet
Light Running, GUARANTEED

Has self-sharpening steel blades, safety disc clutch, high reel clearance. 4-cycle air-cooled motor. Write for free folder.

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THE slow bell tolls, the hidden chorus chants. . . . Under the frowning walls a young girl lifts her face. She calls. Her lover answers from his cell. Clear and enrapt the questioning voices rise . . . tender . . . poignant . . . burdened with grief and longing. They swell and mingle in a long farewell. They fade. The poison claims her.

There are few people in the civilized world today who are not, in a measure at least, familiar with the "Miserere" from *Il Trovatore*. For this scene, set like a jewel in the florid libretto of this gorgeous old opera, is genuinely moving . . . melodically superb. The music finds Verdi at his best, a natural master of the lyric line.

The "Miserere" from *Il Trovatore* has recently been recorded on Victor Red Seal Records by Rosa Ponselle and Martinelli, of the Metropolitan Opera Company, with the full Metropolitan Chorus and Orchestra. It is marvelously clear, marvelously realistic.

The foremost artists and orchestras, the most important compositions, are always at your command on Victor Red Seal Records . . . Victor's permanent contribution to the music of the world. . . . Victor Talking Machine Company, Camden, New Jersey, U. S. A.

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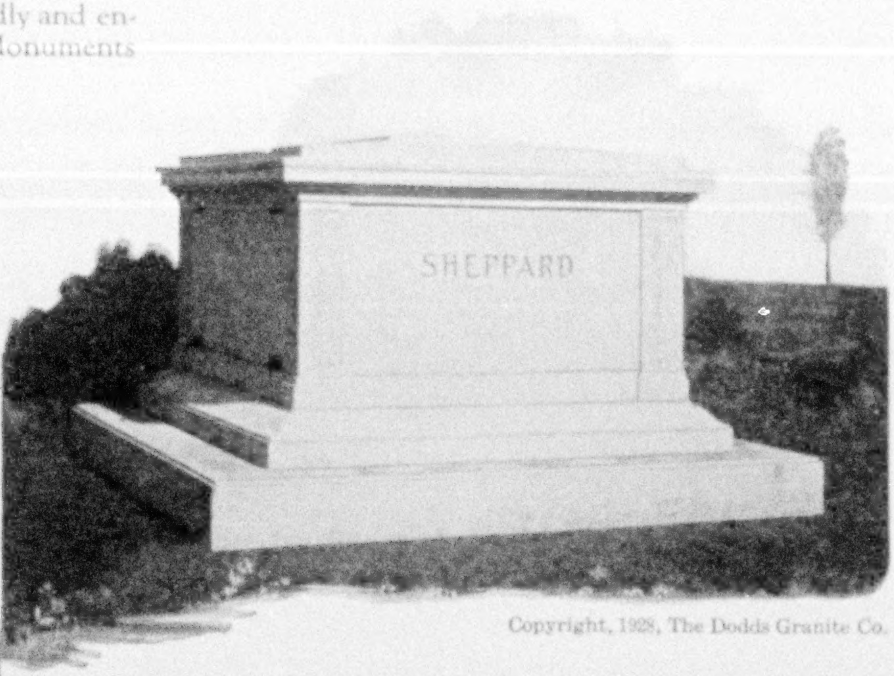
Many are grateful for the information received from our book, "Modern Memorial Art." Write for your copy.



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Above: A two-crypt Sarcophagus erected in Oskaloosa, Iowa, of Stony Creek Granite.

At left: The polished Urn and massive Tablet are here presented in an original treatment.

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MILFORD, MASS., KEENE, N. H.
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VICTORIA WHITE GRANITE
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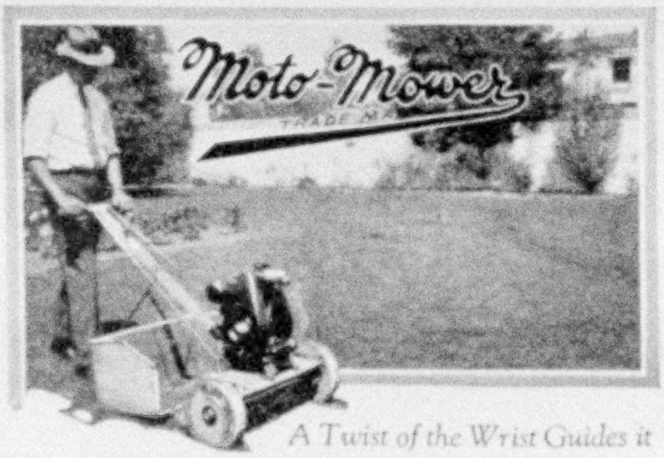

A Twist of the Wrist Guides it

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ESTABLISHED IN 1882

The "Left-behinds"

© 1929 M. L. I. Co.

A SHORT time ago a business man, happily married and the father of two children, showed signs of failing health. A searching examination revealed tuberculosis. He was ordered to give up his business immediately and go to a sanatorium for proper treatment and care.

An uncle of the young man was greatly shocked when he heard the report. He asked for the evidence. They handed him x-ray photographs which showed that his nephew's lungs were seriously affected. The uncle asked permission to show the photographs to his own doctor.

When that doctor saw the photographs he said, "The right thing was done. Your nephew will probably get well. Now, what have you done for the man's family, especially the children? Have they been examined? You have no time to lose. While tuberculosis may not have made any serious inroads on their health as yet, it is hardly conceivable that his wife and children are entirely free from infection."

Every child who at any age has had prolonged exposure to tuberculosis should have an immediate, thorough physical examination, especially including the tuberculin tests and x-ray photographs, to determine whether or not active or latent disease is present. While tuberculosis usually attacks the lungs, it may attack any part of the body—eyes, ears, nose, throat, glands, joints, bones or vital organs.

It is now believed that many cases of tuberculosis in adults are the direct result of infection in childhood. The germs may have been taken into the body when the person was very young and have remained dormant for many years.

Boys and girls, apparently healthy, may have latent tuberculosis, without a sign of infection—no cough, no loss of weight, good color. But years later, when some extra strain is put upon the body, the symptoms appear—loss of weight, persistent cough, "indigestion" and fatigue.

When every child is properly fortified against the ravages of tuberculosis, the final victory over this deadly enemy will be in sight.

This year there will be a great forward step in the battle against tuberculosis. Efforts will be made to protect "the others"—the family and friends of the stricken person—even *before* the signs of tuberculosis show themselves, but while the disease may be latent.

Organizations for the prevention of tuberculosis—national, state and local—will warn people of the infection which may follow living in the same household or associating with one who has tuberculosis. Their action-inspiring slogan, "Early discovery—Early recovery," will be displayed on billboards, car cards and banners all over the country.

By checking tuberculosis in its earliest stages, before the germs have had time to destroy bone or tissue, tens of thousands of lives can be saved. Send for the Metropolitan's booklet, 49-N—"Tuberculosis". It will be mailed free on request.

HALEY FISKE, *President*.

METROPOLITAN LIFE INSURANCE COMPANY – NEW YORK

Biggest in the World, More Assets, More Policyholders, More Insurance in force, More new Insurance each year

The Treasure has been found. It is shared with all those who love sweets. The trail of the treasure hunter leads to the sign of the nearest Whitman agent—Ask him for Whitman's PLEASURE ISLAND CHOCOLATES.

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VIRGINIA—A COMMONWEALTH THAT HAS COME BACK

By William Joseph Showalter

Author of "Massachusetts—Beehive of Business," "New York—Metropolis of Mankind," "Chicago To-day and To-morrow," etc., etc., in the National Geographic Magazine

THE outstanding impression of many months of wandering amid the scenes and shrines of Virginia is that the Old Dominion is a Commonwealth that has come back completely from one of the greatest catastrophes that ever befell a people.

These pious pilgrimages in part led the author's feet along the pathways of the four years' struggle between the dauntless Army of the Potomac and the heroic Army of Northern Virginia, from the first assault at Bull Run to the final charge at Appomattox, for he wanted a picture of the State at the close of that epic era—wanted a bench mark, so to speak, by which to gauge the rise of the tide of progress and prosperity since the return of peace.

RUIN AND DESOLATION STALKED EVERYWHERE

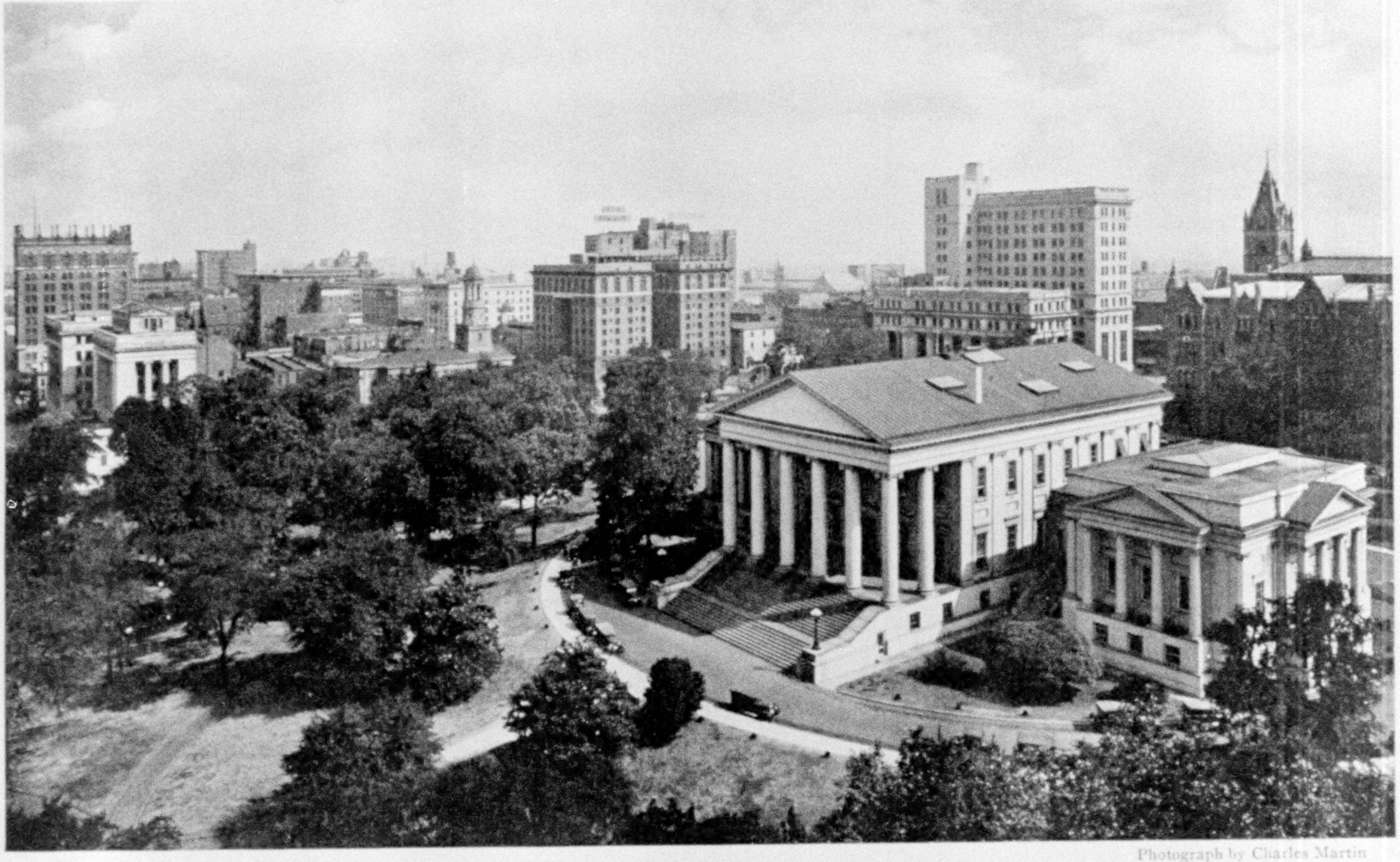
When it is remembered that a million and a half American soldiers were, first and last, mustered into the armies that fought for four long years on Virginia soil, with only two short interludes of a week or so, when they turned aside to Antietam and Gettysburg, and that they fought as only men can fight when stirred to the core by their convictions, it is little to be wondered that Appomattox left the Mother of States desolate, her people in despair, and rack and ruin stalking everywhere.

Her farms and plantations, once the pride of her people, had been neglected and laid waste; her barns had been burned and her fences used for seasoned firewood by troops that could not wait for other fuel; her horses and cattle had been commandeered by Mars, the former for cavalry mounts, artillery spans, and wagon teams, and the latter for a meat supply that could march on its own hoofs.

Her turnpikes in ante-bellum days were America's most complete adventure in the realm of good roads. Over them had rolled the carriages of the socially elect and the politically distinguished, en route to their common meeting grounds at White Sulphur, Hot Springs, Old Sweet, Rockbridge Baths, and the galaxy of other noted watering places of the period; over them had moved the covered-wagon caravans which hauled the products of the Valley and the Piedmont to the cities of the Tidewater and the Plain. But the war's end found them worn down to the foundation bowlders by the unending grind of supply trains, baggage wagons, artillery carriages, cavalry, and foot soldiers.

Her bridges had been dynamited or burned under the demands of military necessity, her mills had been put to the torch, many of her factories were in ruins, and not a few of her cities had felt the withering flames of war.

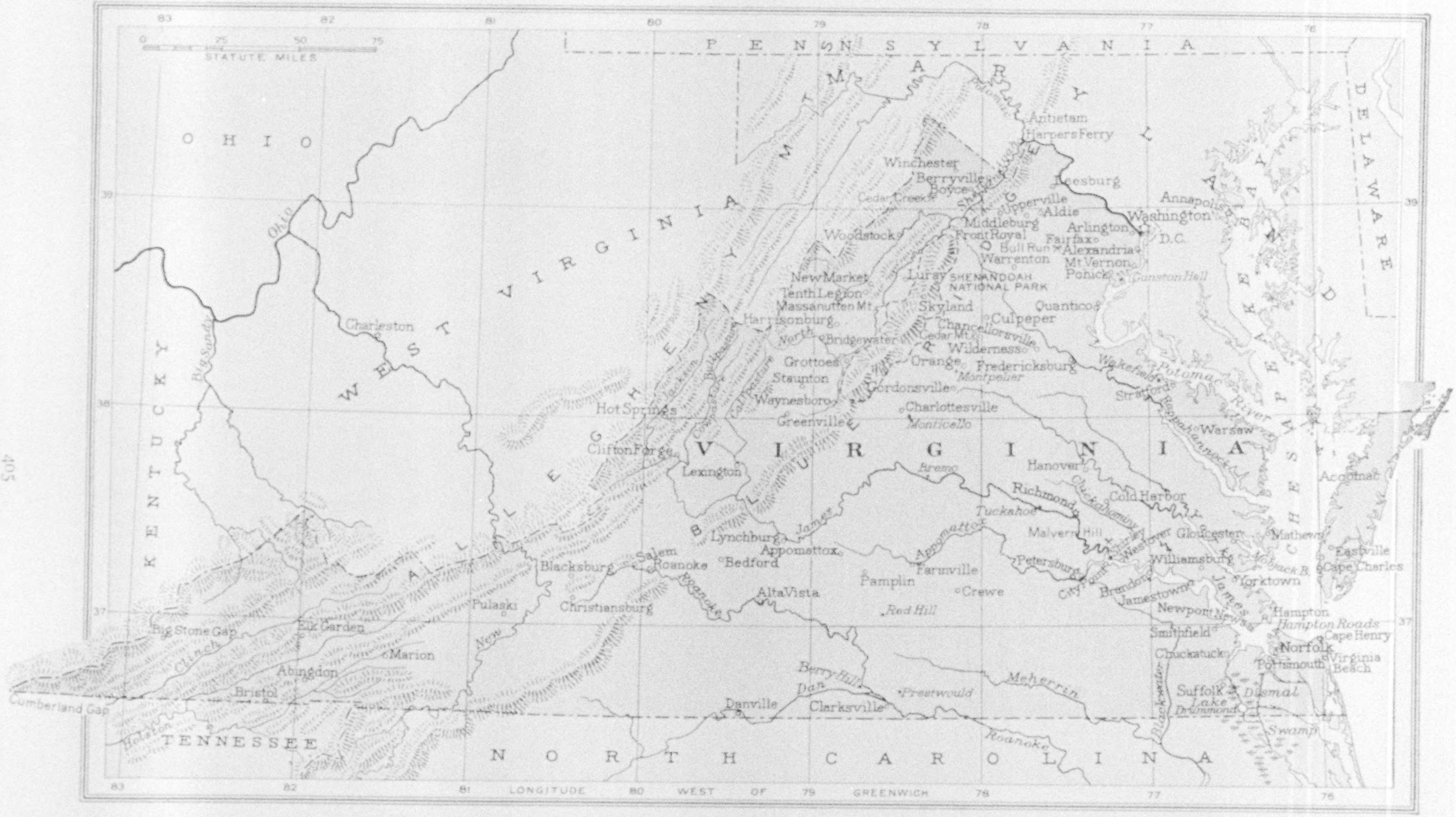
All over the State reigned a physical desolation typified by the declaration that General Sheridan had laid the Shenandoah Valley so bare that a crow traversing



Photograph by Charles Martin

THE CAPITOL AND ITS ENVIRONS, AT RICHMOND

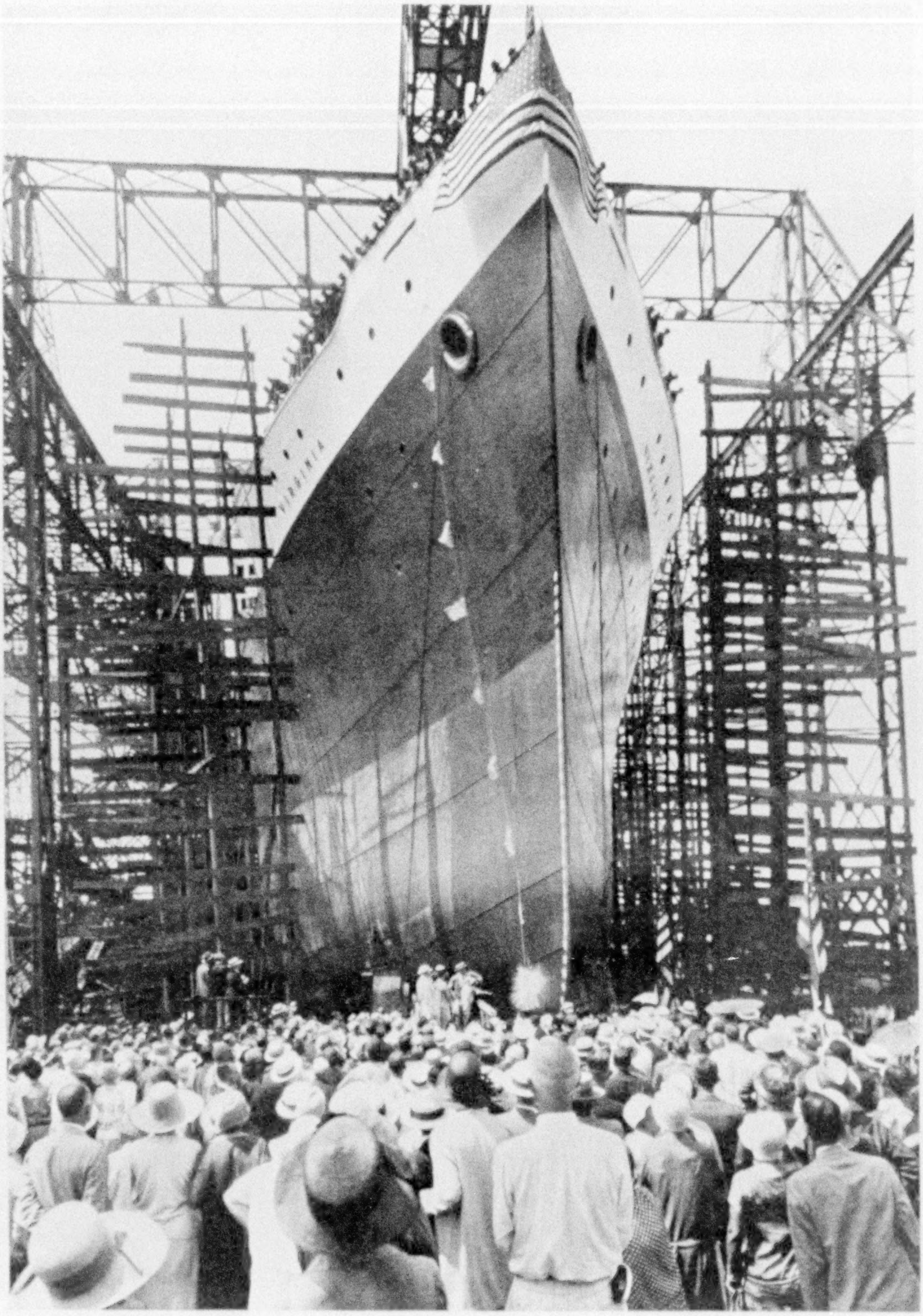
When Thomas Jefferson was Minister to France, he wrote from Nimes to a French friend: "Here I am gazing whole hours at the Maison Quarrée [Carrée], like a lover at his mistress." Later he had opportunity to draw the plans and "crown Richmond's Capitol Hill with a reproduction of the ancient Roman temple on Gallic soil." The two smaller wings are modern additions.



Drawn by James M. Darley

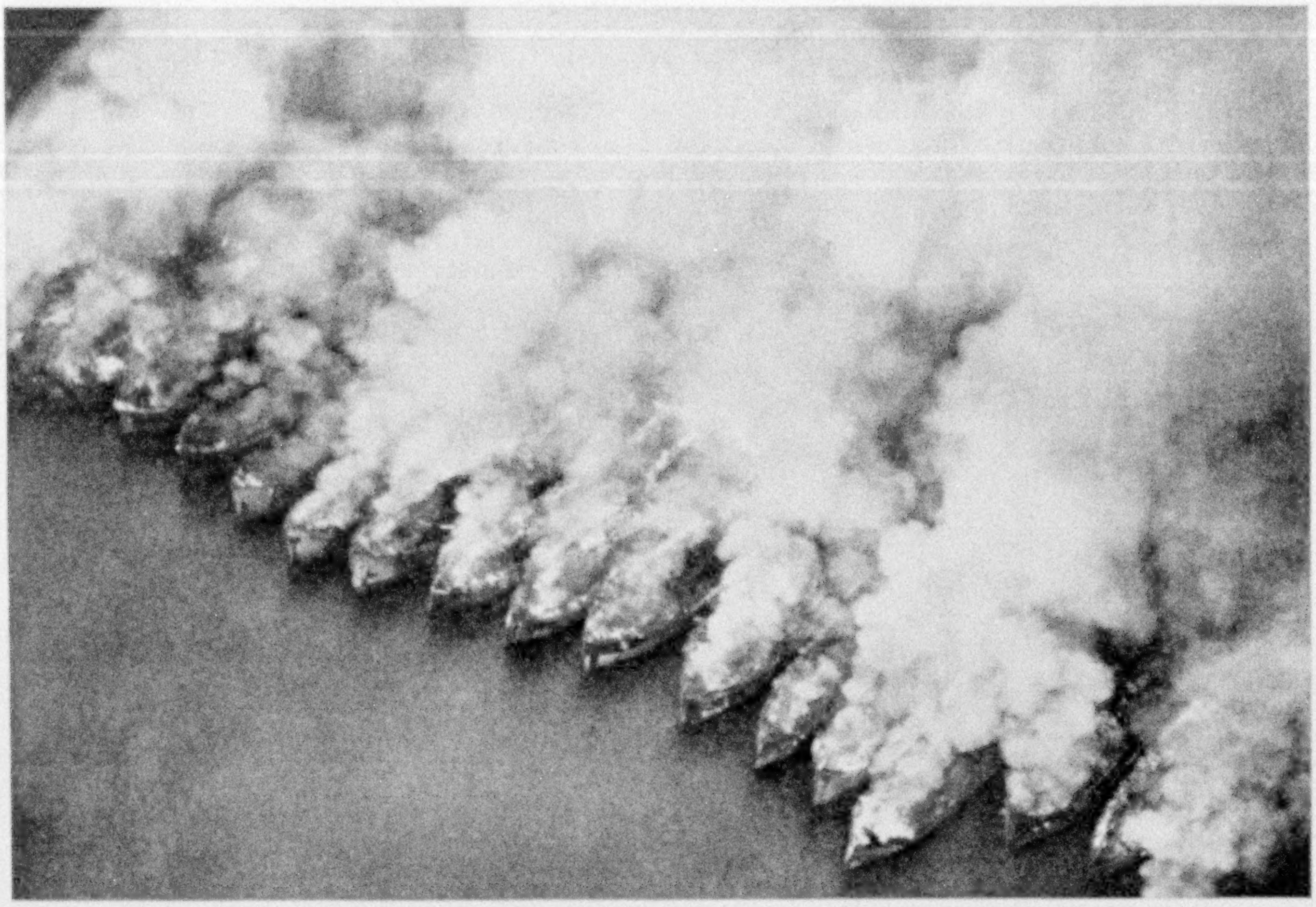
A MAP OF VIRGINIA

Geography has been good to the Old Dominion. Situated in that belt where the mean of American climatic conditions is to be found, it is a land of overlapping faunas and floras. Likewise it is a land of intermingling people. West of the Blue Ridge its basic population was Scotch Irish, Swiss, Dutch, and German; east of the mountains, English. In crops, industries, and commerce as well as in terrain it is eastern America in miniature. Its irregular western boundary was drawn in accordance with the area held by the North and the South, respectively, when the State of West Virginia was established. Before the Civil War it was larger than the whole of New England—larger than any other State east of the Mississippi River.



THE LAUNCHING OF THE "VIRGINIA" AT NEWPORT NEWS

This electrically propelled steamer, which, with its sister ship, the *California*, now plies between New York and San Francisco via the Panama Canal, represents America's answer to those who thought shipbuilding was doomed in this country. The *Virginia* is the largest passenger ship, measured by gross tonnage, ever built in the United States (see, also, text, page 433).



Official Photograph, U. S. Signal Corps

A FLEET CONSIGNED TO THE FLAMES AT QUANTICO

After the World War hundreds of wooden ships were towed into the Potomac and anchored there. More than $30,000,000 had been expended on those here shown lashed together and being burned for the scrap in them. Scores of others still remain, mute witnesses of the days when America planned to bridge the Atlantic with ships.

it would have to carry his own rations. Appalled by the devastation, Sheridan asked authority to feed the populace.

Nor was that all. Many thousands of the homes of the State had seen father and son and brother alike march off to war, some never to come back, some to return only as cripples for life, and most of the remainder to resume their wonted tasks with the imprint of years of unprecedented privation and semistarvation written permanently in their weakened constitutions.

Furthermore, the State's treasury was empty, the public debt was staggering, and the people's surplus and savings had disappeared with the evaporation of all value from Confederate bonds and moneys.

A NORTHERN FRANCE WITHOUT HER VICTORY

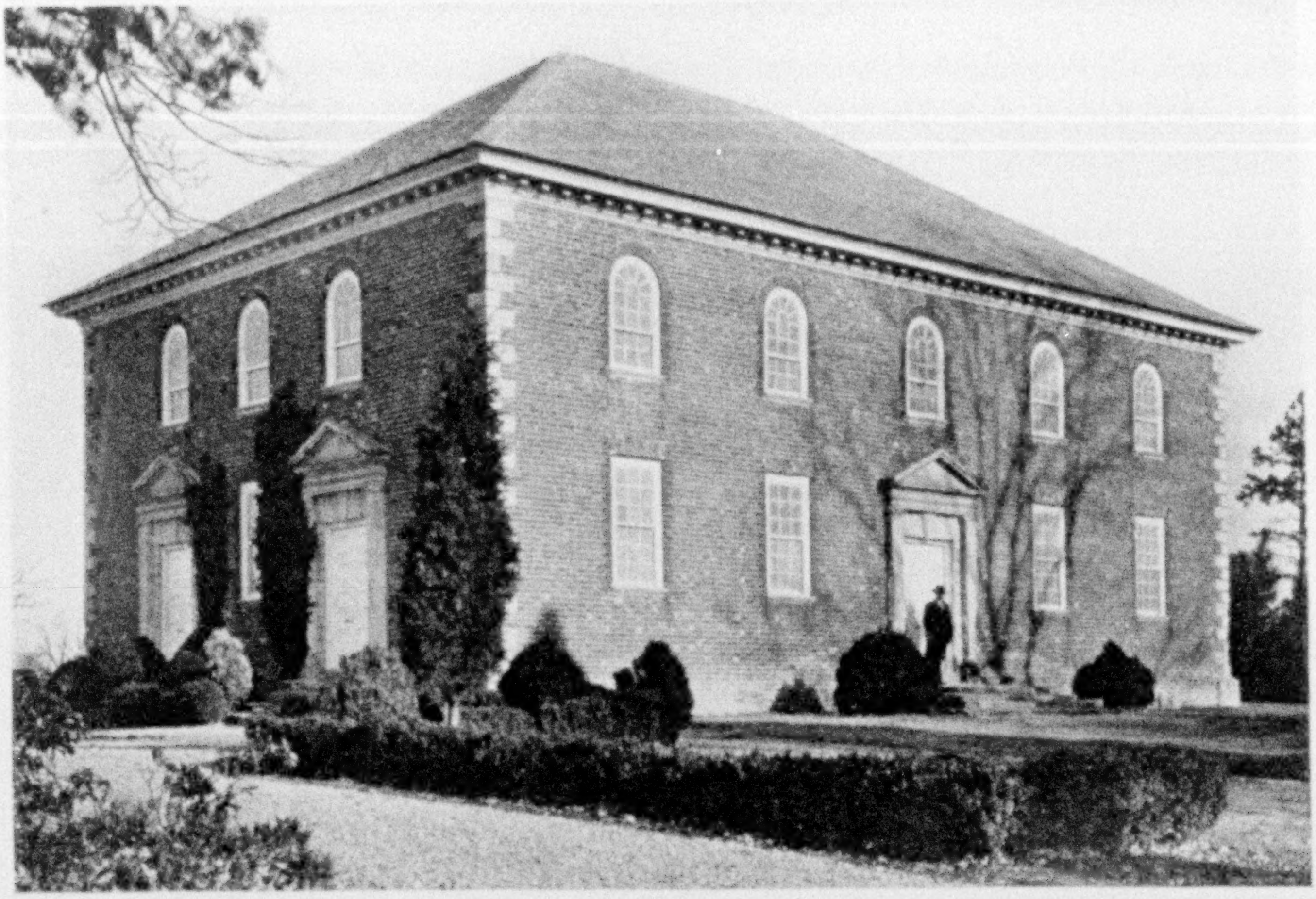
Her territory had been divided, and the raw materials out of which she could resurrect her industries most quickly had passed to the State created from the section of which she had been deprived.

A Northern France without her victory, her Alsace-Lorraine lost instead of won, Virginia had nowhere to look for reparations, nowhere to turn for rehabilitation credits, no friendly ally to indulge her debt.

Nor does even this complete the picture. A third of her population had passed from employment to idleness under a new-found freedom which they yet had to learn how to use, and a carpetbag government voted bonds compounding defaulted interest, for the payment of which even that unsympathetic government could find no sources of income in the State.

Could any State, thus encumbered, thus fettered, regain its financial feet, restore its devastated areas, repair its credit, renew its prosperity?

The world doubted and stood aloof. But the people of the Old Dominion again were to have opportunity to show the manner of mettle that enters into the make-up of Americans. With no capital but courage, no resource but resolution, they set themselves grimly to a Herculean task.



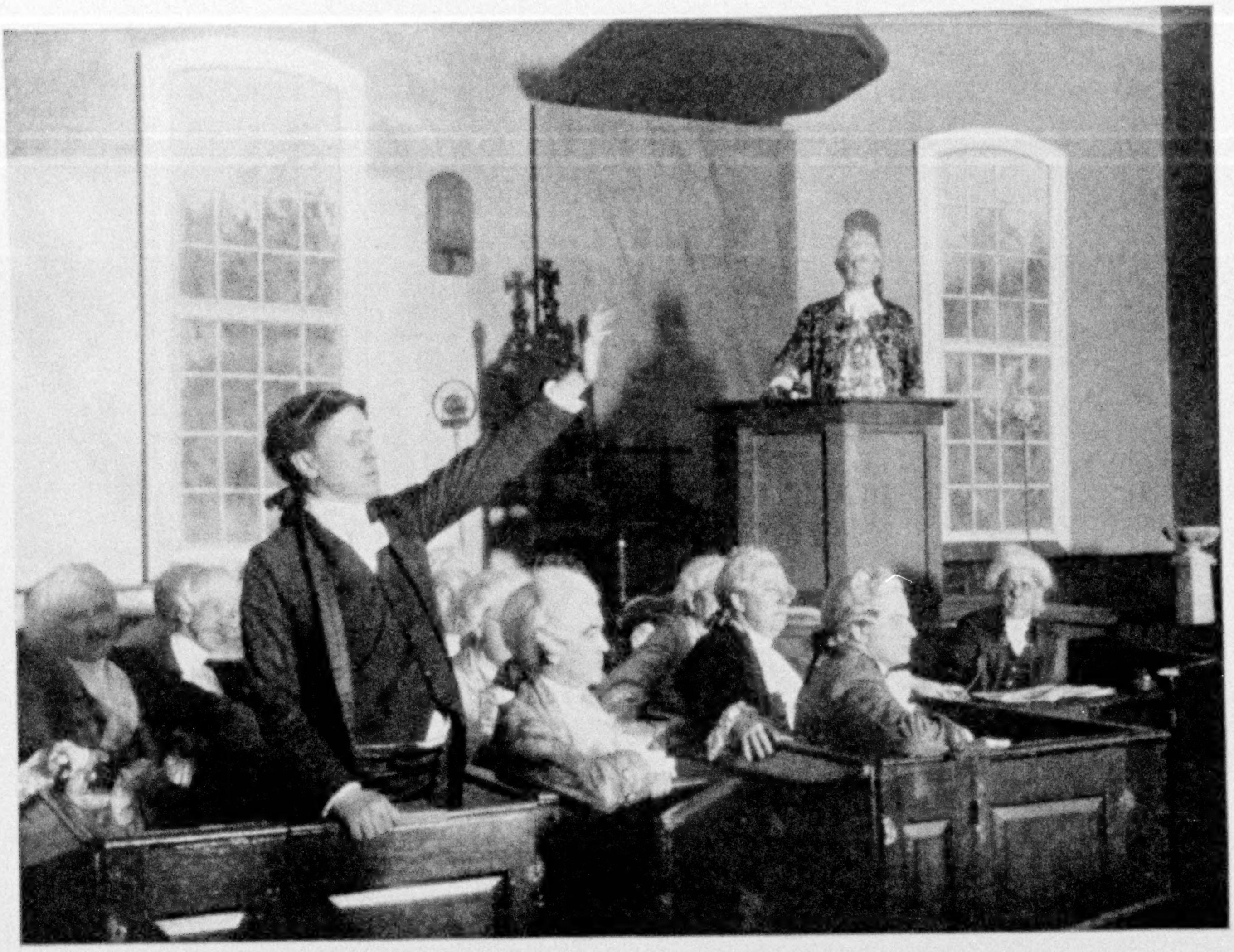
PUBLIC-SPIRITED CITIZENS HAVE RESTORED OLD POHICK CHURCH

The venerable place of worship stands to-day as it was when many of the aristocracy of northern Virginia attended service here in Washington's time.

Photographs by Clifton Adams

THE INTERIOR OF POHICK CHURCH

The middle pew of the left center row, with four people standing in it, was that occupied by General Washington. Here he worshiped continuously until the Revolution, and until his death he maintained two pews in the church for the family and guests at Mount Vernon (see, also, Color Plates I, II, and III).



DELIVERING PATRICK HENRY'S FAMOUS "GIVE ME LIBERTY OR GIVE ME DEATH" SPEECH

The editor of one of Virginia's leading newspapers, himself the silver-tongued orator of the Old Dominion to-day, took the part of Patrick Henry in a recent pageant depicting the meeting of the Virginia House of Burgesses in old St. John's Church, Richmond, when the Revolutionary patriot's cry for liberty electrified the American Colonies (see, also, illustration, page 414).

It was a long, hard, gruelling grind. Saving a little here, building a little there, but always struggling in their well-nigh hopeless poverty to feed the hungry mouths of their families, to give their children an education, and to provide provender for the faithful servants of a bygone order, who knew nothing of providing for their own morrow, her people began to move forward. But with what painful slowness!

Decades rolled by and the world forgot the measure of Virginia's despair and desolation after Appomattox. It began to talk of her decadence. She was a State that "lived on the past"; hers "a people that had shot their bolt"; she was "a good State to be from—away from." "She might be the Mother of States and statesmen, but that was long ago!" Such were the phrases that revealed the world's estimate.

But the world had failed to understand that, as President Coolidge, speaking on the South as a whole, observed in an address at Cannon Falls, Minnesota, her tasks had been made doubly difficult; she not only had to repair the damage of the war, but also had been put under the necessity of revamping and making over her entire social order.

A NEW ERA DAWNS

Finally, shortly after the turn of the century, the State, triumphing over every obstacle, saw the dawn of another era. The devastation of the Civil War period at last had been repaired and Virginia was free again.

Two decades of this new freedom have accomplished wonders. The unsentimental, nonpartisan statistics of the Federal Census are a better witness than I to the progress the years have brought.

Photograph by E. S. Shipp

THROUGH THE SHENANDOAH NATIONAL FOREST

As it winds across Calfpasture, Cowpasture, and Bullpasture rivers, over ridge after ridge and through one happy valley after another, the historic old Parkersburg Turnpike unfolds many a vista as varied as this.

Photograph by Tidewater Photo Service

A DISQUIETING HOUR FOR REYNARD

From the days of the cavaliers, Virginians have loved the chase, and from Norfolk to Upperville a red fox and a pack of mellow-voiced hounds, followed by excellent riders on the finest of mounts, make a favorite picture of an animated landscape.

OFF FOR THE HUNT

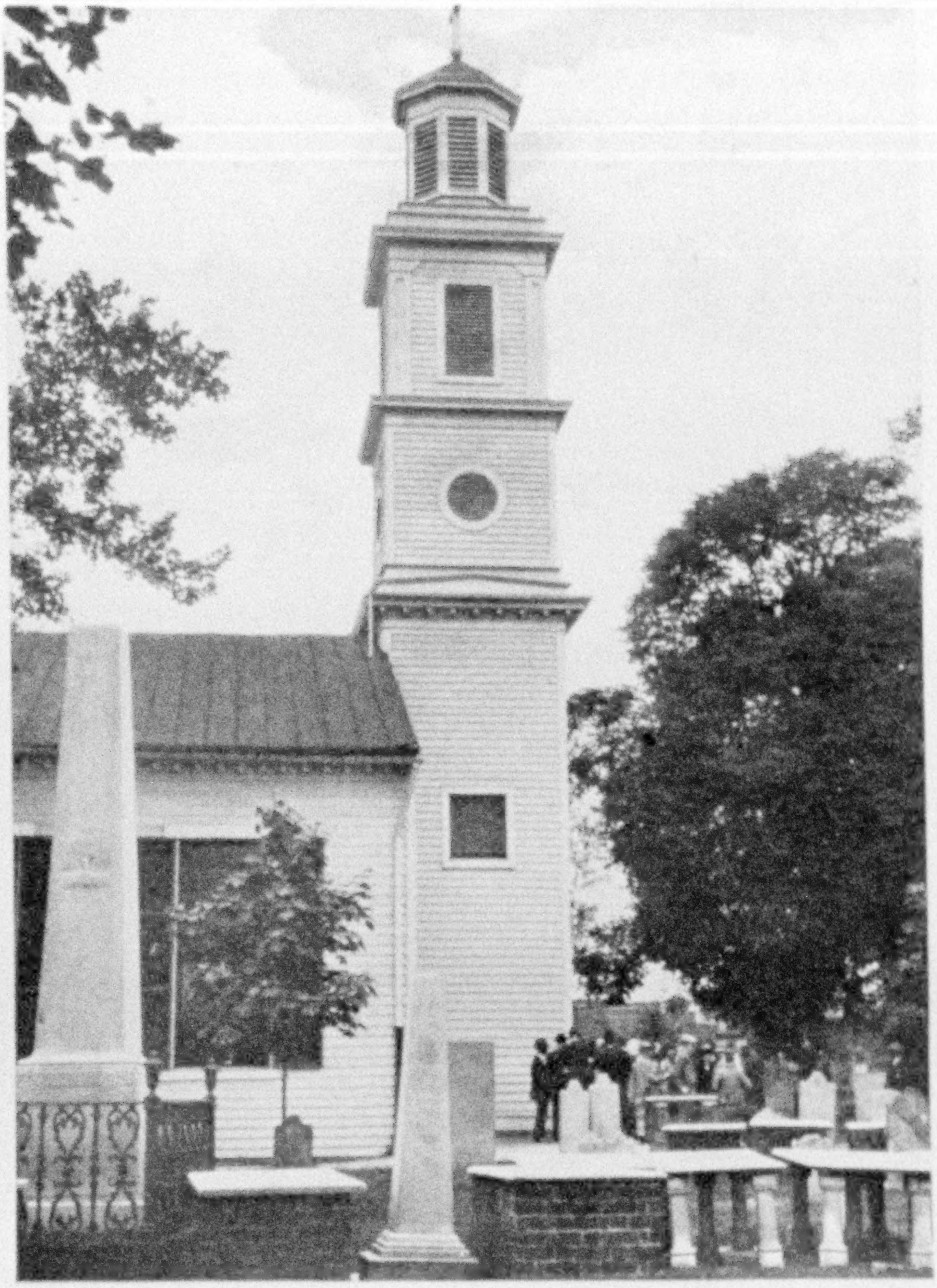
Photograph by Hamblin

THRESHING PEANUTS NEAR SUFFOLK

The peanut did not come into its own until the Civil War, when underfed Confederate soldiers favored it above parched corn as a substitute for rations which were too often not forthcoming (see text, page 424). The industry not only yields peanuts for the "5-cent bag" at ball game and circus, but also gives the grower a superior hay, produces mast for Smithfield hogs, oil for such diverse things as cooking and batik-making, and shell powder for polishing tin plate.

A TRUCK FARM NEAR NORFOLK

In order to meet the demands of the East's markets for fine vegetables early in the season, Tidewater Virginia provides hotbeds by the acre and water pipes for intensive farming. Windbreaks are also developed.



Photograph by Jacob Gayer

OLD ST. JOHN'S CHURCH, RICHMOND, WHERE PATRICK HENRY STIRRED THE COLONIES (SEE, ALSO, PAGE 409)

So closely had McClellan invested Richmond in 1862 that the Federal soldiers in the advanced trenches could hear the tolling of old St. John's bells, calling the people to worship.

They tell in terms more eloquent than any words the power of an American community to recuperate and come back.

They show that between 1870, the earliest date available for dependable wealth statistics after Appomattox, and 1922, the latest date available for similar statistics of the present, the wealth of the State increased nearly fourteenfold. During the same period that of Massachusetts, which never felt the tread of an unfriendly foot nor heard the sound of a hostile gun during the entire Civil War, increased less than eightfold, while that of Pennsylvania, which had only Gettysburg to repair, expanded but a shade over ninefold.

Making the bricks of progress without the straw of working capital, with unpitying Poverty as her taskmaster, Virginia transformed penury into prosperity and the ruins of war into the edifices of peace. The story of this achievement constitutes an epic of American courage and American resourcefulness.

One familiar with conditions that obtained six decades ago notes the new order everywhere, from Harpers Ferry to Cumberland Gap, and from the crest of the Alleghenies to the beaches of the Eastern Shore.

The farms of the Shenandoah and the plantations of the Piedmont and Southside again yield the milk and honey of bounteous crops.

New barns have been built, larger and better than before; old rail fences have been replaced by those of plank and wire; Virginia-bred horses win in Derby races and style shows; Virginia-grown cattle move for export in trainload lots, and Pulaski County holds the American place of honor for the largest percentage of farmers using pure-bred live stock.

THE BEFORE AND AFTER IN HIGHWAYS

Likewise worn-out turnpikes have been replaced by modern highways, and dynamited bridges by modern steel and concrete structures; so that on the main thoroughfares one may travel from the Potomac to the Dan and from slack-water to the sea on

TOBACCO CORDED AND READY FOR CURING

Virginia in 1927 had 178,000 acres planted in tobacco. Tobacco manufacture was the State's leading industrial operation, the output of its factories being valued at $144,000,000 (see, also, text, page 424).

concrete and macadam, all built on a pay-as-you-go plan, largely through the imposition of a gasoline tax, without incurring a dollar of bonded indebtedness for their construction.

Also Virginia's mills, her factories, and her cities have become as modern and as prosperous as those of any section of the country, a new stock of manhood has grown up, and new economic history is being written.

The building programs now under way in the rayon industry, for instance, will give her an output of this new textile constituting two-thirds of the production of the United States and much more than that of any other country in the world.

In finances the same situation prevails. The State's treasury, once so impoverished that its entire income was sufficient merely to meet the interest on the then-existing State debt, now has an annual surplus amounting to more than its entire post-bellum income; the State debt has been reduced to a point where the value of the negotiable holdings of the Commonwealth in the Richmond, Fredericksburg, and Potomac Railroad plus that of the investments carried by the Literary Fund (established for the maintenance of State educational institutions) would suffice to wipe it out entirely.

PROVIDING A PLAYGROUND FOR EASTERN AMERICA

To-day the Old Dominion, having solved the last of the innumerable problems that grew out of the aftermath of the Civil War, again has time to think in terms of service to the Nation, and is signalizing this new era by arranging to dedicate to the well-being of those millions of people who reside within easy reach of it a magnificent area of 327,000 acres of mountain playground, which will be known as the Shenandoah National Park. More

NUMBERING A FOXHOUND FOR A FIELD DAY IN TIDEWATER VIRGINIA

Excellent game laws carefully maintain the balance in Virginia between overhunting and too much protection. Deer and bear abound in a number of areas; wild turkeys, quail, and rabbits provide excellent shooting; millions of migratory ducks yield sport for the waterfowler, and a thousand mountain streams offer delights for the disciples of Izaak Walton.

Photographs by Tidewater Service

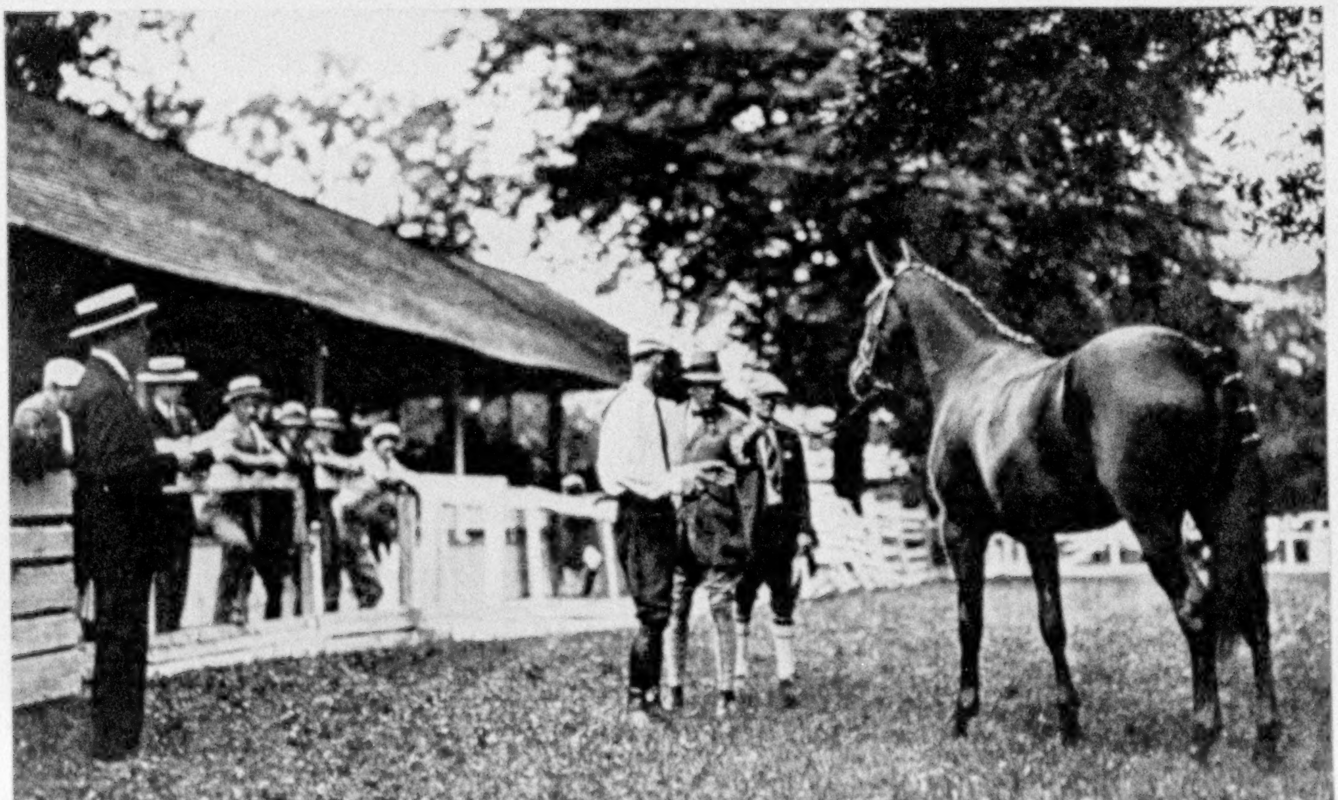
A PORTION OF THE PACK OF THE PRINCESS ANNE HUNT AND KENNEL CLUB

Virginia fox hunters are divided in their allegiance. Some belong to the National Steeplechase and Hunt Association, and to them the horse is paramount. Others, to whom the skill and music of the foxhounds are uppermost in the chase, belong to the Fox Hunters Association.

Photograph by Delmar C. Fewell

A FOX-HUNTING SCENE NEAR WARRENTON

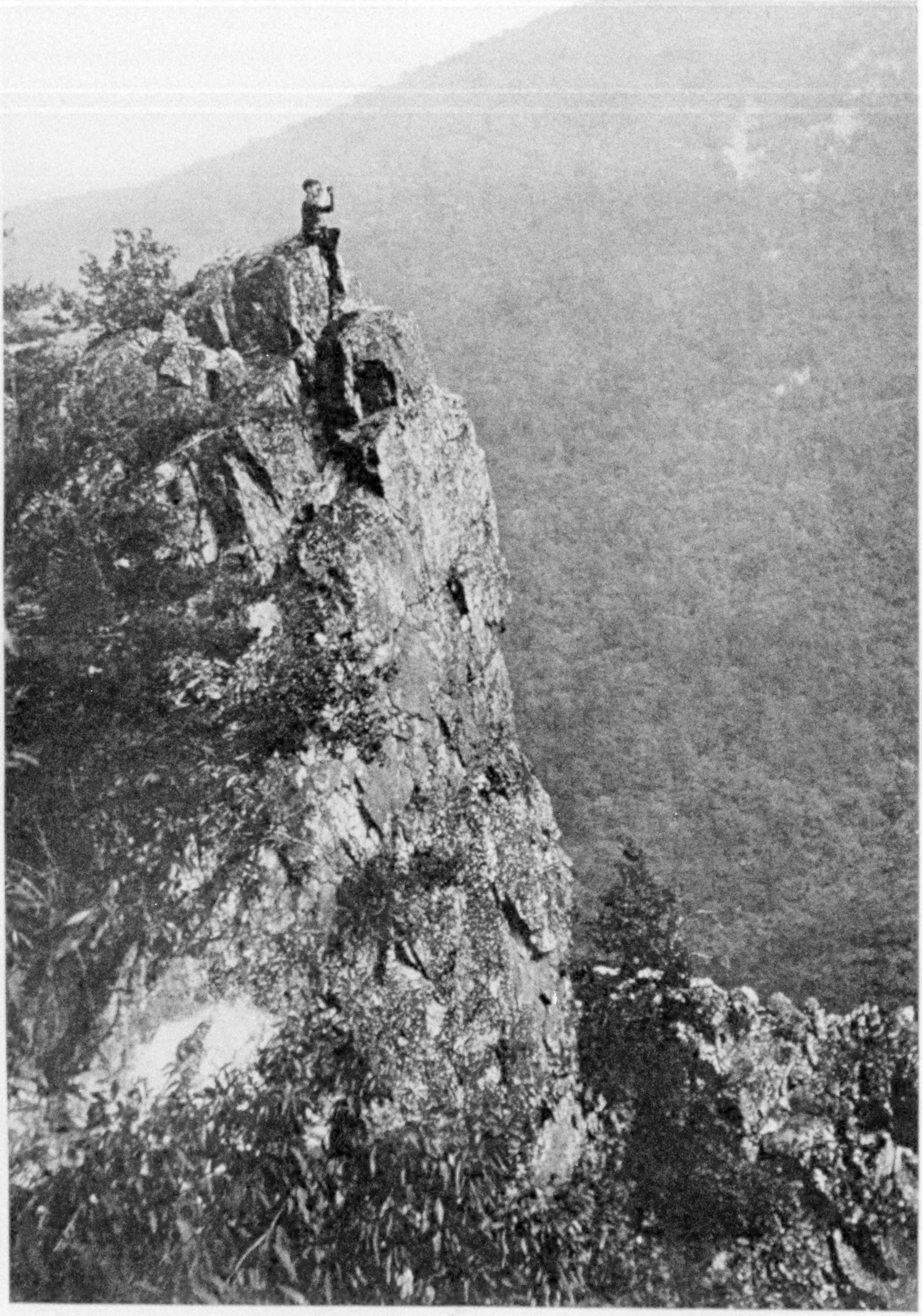
The passing of the old worm fence in Virginia has been a hard blow to small game. Nesting places for birds and retreats for rabbits in the fence-corner growth of weeds, grass, and briers have no place along a modern wire fence, and foxes, dogs, and horses alike are at a disadvantage where the old order gives way to the new.



Photograph by Edwin L. Wisherd

JUDGING A HUNTER AT THE MIDDLEBURG HORSE SHOW

The present-day master of the American turf is Reigh Count, foaled in Rockingham County. Many blue-ribbon holders among hunting horses likewise are products of Virginia soil (see text, page 422).



Photograph by Harry Staley

WHERE THE ROCKS RISE OUT OF THE FOREST IN THE SHENANDOAH NATIONAL PARK AREA

The State authorities are proceeding with the condemnation of the 327,000 acres of land which the Commonwealth will deliver in a body to the United States for development as one of the great national playgrounds of the East (see text, page 415).

APPLE BLOSSOMS IN THE SHENANDOAH VALLEY

White with hope in the springtime or red with realization in the autumn, which is the fairer orchard scene? (See, also, Color Plate VII.)

than a million dollars has been raised by the direct gifts of the people, and another million has been provided through the State legislature for the purchase of the land.

For a distance of some 50 miles this park will embrace the Blue Ridge and its foothills, between Front Royal and Waynesboro. Virgin forests, splendid waterfalls, noble peaks, fine trout streams—everything in mountain terrain that can delight the eye, rejuvenate the body, and edify the spirit of man—are there.

It is the plan of the United States Department of the Interior to make the park a playground and recreation area *par excellence* for the 40,000,000 people who live within a radius of 350 miles of it.

One of the dreams which the National Park Service has for its development is a 50-mile skyline drive from the latitude of Front Royal to that of Waynesboro. The State Highway System will bisect this mountain-summit boulevard at Thornton and Swift Run gaps and terminate it at Chester and Rock Fish gaps.

As one motors along this skyline highway, to the east a thousand vistas of the splendid Piedmont plain will unroll before delighted eyes, and to the west the meanderings of the Shenandoah, the crazy quilt of fertile field and fine woodland, the contrasts of hill and dale, town and country, present an ever-changing panorama.

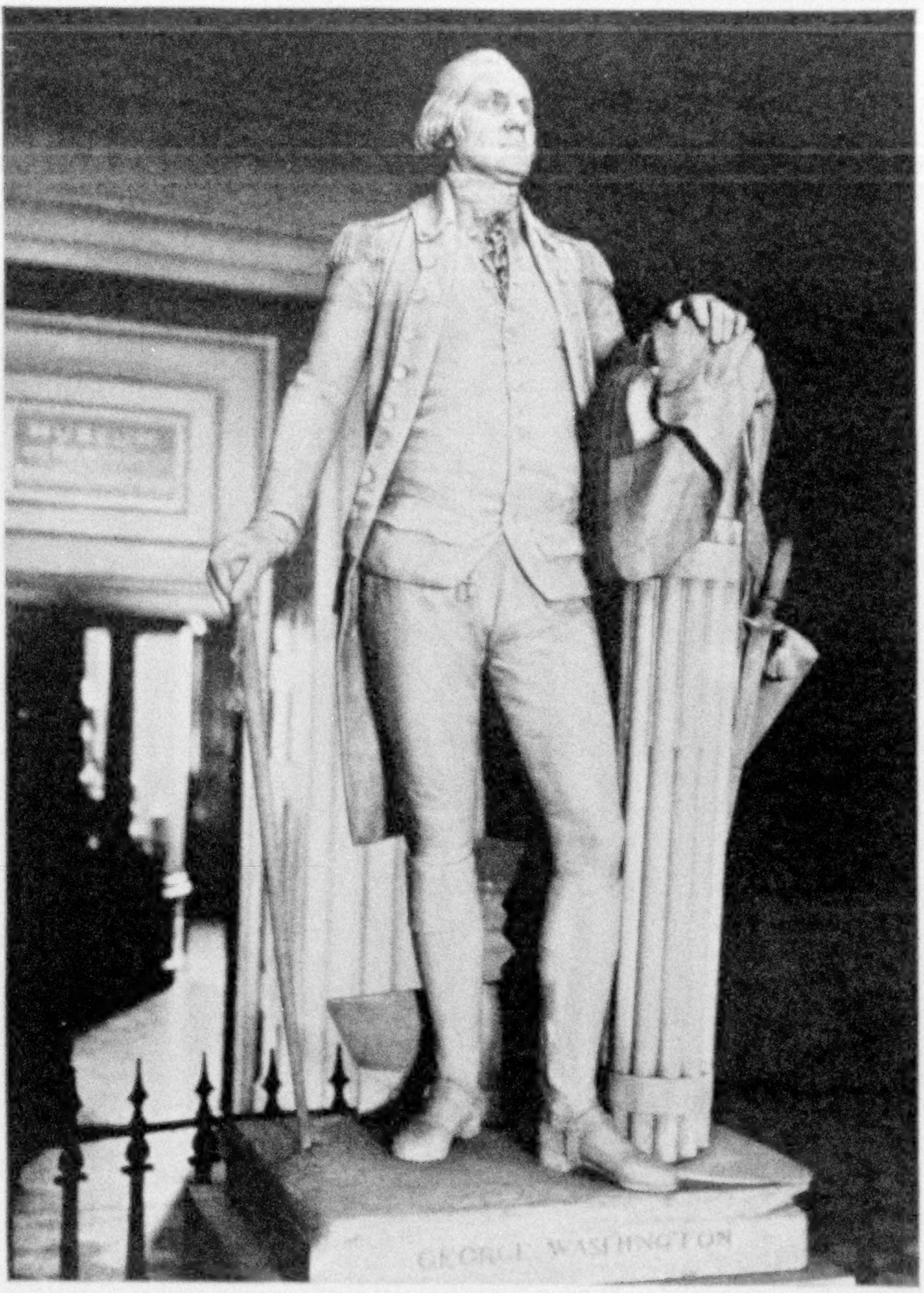
THE MANY MOODS OF OLD STONY MAN

What stories old Stony Man, towering above valley and plain as El Capitan rises above the Yosemite, will have to tell to those who wander up to his mountain stronghold! What moods he will reveal to those who stay by him long enough to see him in sunshine and in storm, in summer and in winter!

It was my privilege to go with the members of the Appalachian National Park Commission when they were asked to consider the area from the standpoint of its availability as a national park.

We started up the mountain on a late autumn afternoon. But old Stony Man was not ready to receive us. He hid his head beneath a veil of fog and covered the valley below with a robe of the same texture.

Darkness came with never a sign of



VIRGINIA'S MOST TREASURED STATUE

This statue of Washington, standing in the rotunda of the Virginia Capitol, was executed by the great Houdon and is the only one in existence done from life. Jefferson secured Houdon's services in France, and both he and Madison bore witness to the faithfulness with which the sculptor recreated the likeness and caught the spirit of the Father of his Country (see, also, illustration, page 422).

welcome, nor evidence of pleasure, but with every indication that we had no place in his heart.

Morning dawned with the trees laden with ice, the ground covered with a sheet of sleet. Old Stony Man still held himself silent and aloof.

Then evening approached. Down in Kettle Canyon the ascending fog seemed like clouds of steam rising from some giant caldron heated by the fires of Pluto himself. Now and again old Stony Man lifted a corner of his veil and peeped out as the scurrying fog swept by. He was warming up to his visitors like a bashful child to a stranger, but, oh, how slowly!

The next morning his reserve was gone. In all his glory he loomed above us, majestic and imposing, his head uncovered and massive, brilliant in the slanting early sun.

A SEA INVADES THE VALLEY

But the Shenandoah Valley was not to be seen. We could hear the remote rumble of a train, the distant whistle of a locomotive; we could even catch here and there the far-away barking of a dog and the mile-muffled crowing of a rooster.

But where our geography and our experience alike told us the Shenandoah Valley lay, there was only an ocean of fog. Out in the midst of this billowy sea we saw a low-lying blue reef, with here and there channels that broke its continuity and made it seem a chain of enchanted islands.

To our right a peninsula jutted out into the white-surfaced sea. Breakers of fog rolled up the craggy shores of this promontory and sent their spray into the tree tops.

The sun at last peeped over the mountain, here and there tingeing the milky whiteness with rich hues of salmon pink.

And then the towering shape of old Stony Man cast his shadow over its own particular sector of the rolling billows, a giant in silhouette come down from the heights to rest momentarily in the midst of the deep.

Photograph by Jacob Gayer

THE OLD SLAVE BLOCK AT FREDERICKSBURG

Those turquoise isles across the way were the tops of Massanutten Mountain, the straits between them, the wind gaps that break their level. The peninsula was the buttressing ridge along which the Lee Highway descends from Thornton Gap to Luray.

Old Stony Man had called back, for the space of passing minutes, the geological long ago, when the Shenandoah Valley was the bed of an ancient sea, of the Mediterranean type, that stretched from the Pacific on the south coast of Nicaragua to the Atlantic in the vicinity of southern Greenland; had recreated the era which followed the emergence of himself and his mountain range from beneath the surface of that sea.

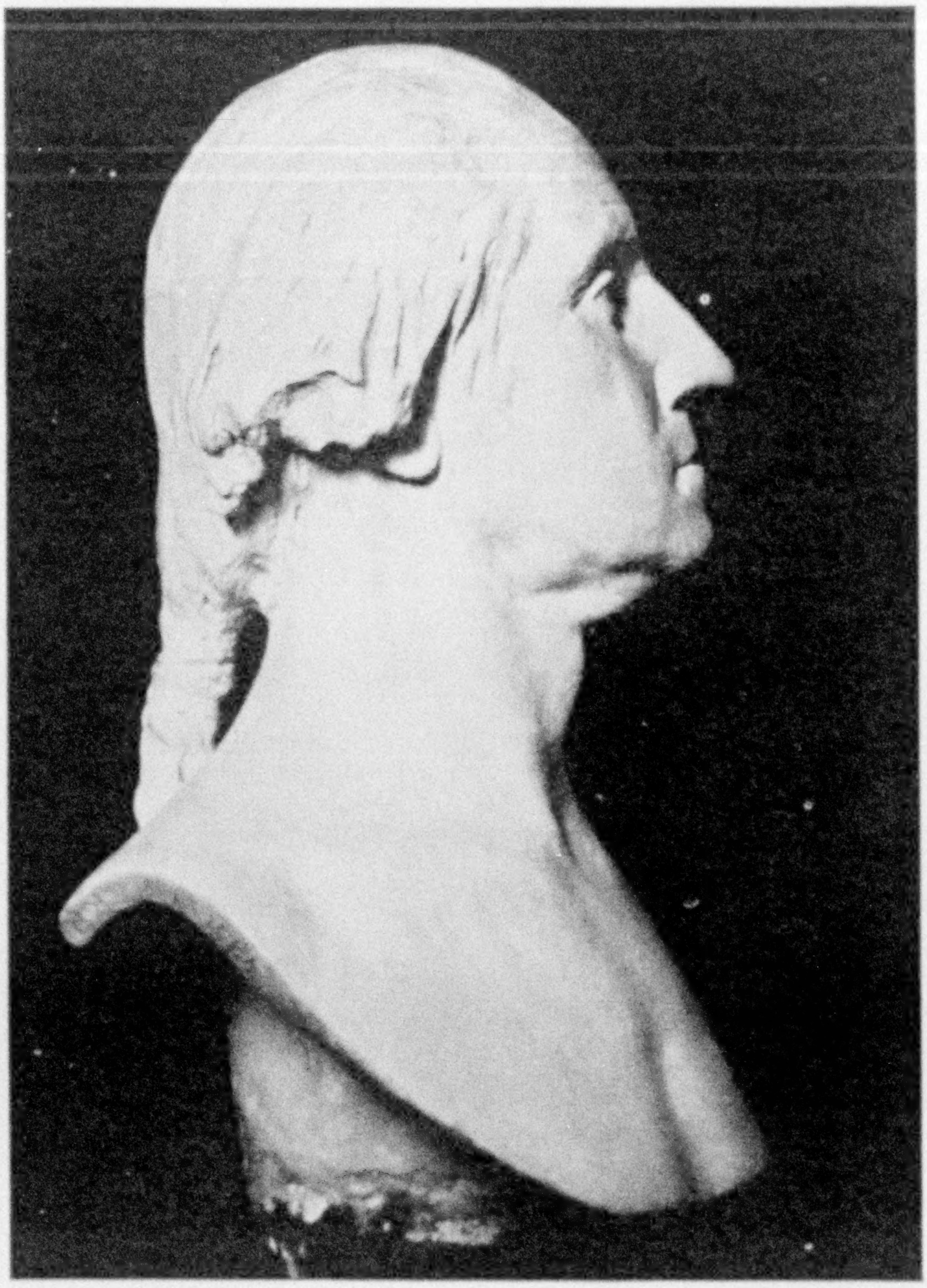
As the Commissioners rode away that day, southward along the skyline, and the sun burned out the milk-white sea that had submerged the Valley panorama, one instinctively knew that old Stony Man had played his rôle to perfection and had sent them away resolved to report favorably upon the proposal to establish a national park of which he should be the monarch.

SITTING IN AT THE BIRTH OF THE CLOUDS

Winter came and went, and spring in its turn was well spent when the National Conference on State Parks gathered under the Grand Old Man's shadow.

I had ridden up to Skyland, hard by his habitat, on a hot Sunday morning. After luncheon we looked far out over the Page Valley, and thence across the summits of the Massanutten to the Alleghenies in the distance. Storm clouds were rolling eastward. We saw them sweep across the western valley, leap Massanutten Mountain, and then come rolling over the eastern valley and up the mountain toward our eagle's-nest abode.

On and on the storm came, with flash of lightning and crash of thunder. A little wisp of cloud, apparently no bigger than a hand, took shape out of nothingness, just above the tree tops on the mountain side below. As it rose higher and higher it grew larger and larger, until at last it merged in the great cloud mass above. Here was another, and another, and another. Bits of invisible vapor were feeling the touch of cooler air and being thereby converted into visible cloud; each yard of ascent brought lower temperature and increasing condensation. To see these little



Photograph from Col. Harrison H. Dodge

THE HOUDON BUST OF WASHINGTON

This is the original plaster bust of General Washington made by the great sculptor. It is considered the most priceless relic preserved at Mount Vernon and has never left the premises since the master of the estate sat for it, nearly a century and a half ago (see, also, page 420).

wisps of cloud—scores of them—growing and expanding as they rose, was a spectacle as inspiring as man ever beheld. We literally had sat in at their birth.

Among all the scores of lovers of the great out-of-doors, men and women who have climbed the mountains of many lands, none could be found who ever before had seen this phenomenon of cloud formation.

WHERE REYNARD MUST LOOK TO HIS BRUSH

Virginians have always been lovers of sport. Few States possess such excellent foxhounds, such fine hunt clubs, or such splendid hunting horses. Middleburg, Upperville, Warrenton, and Charlottesville are centers where Sir Reynard must ever keep his weather eye out if he would save his skin and protect his brush; and if there is in all the world a more exhilarating sport than fox hunting, which has been peculiarly a Virginia diversion from the days of the cavaliers, no one who has ridden behind a pack of long-eared, pedigreed, musical-voiced foxhounds has discovered it.

THE VIRGINIA HORSE SHOW BRINGS BLUE BLOOD TOGETHER

In the tang of a frosty Piedmont autumn morning, followed by the élite of Virginia and seaboard cities mounted on hunters foaled and schooled where the blue grass grows, the fox that undertakes to keep ahead of the cream of the kennels of Loudoun, Fauquier, and neighboring counties has his work cut out for him.

The horse-show season in Virginia brings together more men and women who know fine points in good horseflesh than any other event of the year. From early summer to late fall these horse shows on both sides of the Blue Ridge succeed one another as the weeks speed by, and one who makes the rounds of them knows that he is establishing an acquaintance with some of the finest hunting and gaited saddle horses in America.

Boyce and Tenth Legion are places famous for the breeding of winners of many of the most highly prized stakes on

Photograph by Charles Martin

THE WASHINGTON STATUE IN THE CAPITOL SQUARE AT RICHMOND

Around the base stand the Virginia associates of the Father of his Country—Patrick Henry, Thomas Jefferson, George Mason, Thomas Nelson, Jr., John Marshall, and Andrew Lewis. When the 18-ton statue arrived in Richmond from Amsterdam, in 1858, it was drawn to its site by a team of human beings, the people of Richmond refusing to allow horses that honor. The statue is the work of Thomas Crawford.

the American turf. The most recent Derby winner, Reigh Count, foaled in the Shenandoah Valley, at Tenth Legion, went out to the Blue Grass State and showed the best Kentucky thoroughbreds a clean pair of heels.

DOWN IN THE OLD DOMINION'S CATTLE COUNTRY

Pulaski and Wythe, Smyth and Washington, Tazewell, Scott, and Russell are counties famous for their blooded cattle, especially their fine beef strains. So succulent is the blue grass of this favored region that the cattle are ready for market directly from grass, and one sees solid trainloads of export beeves moving out to the seaboard for shipment abroad. Even the Argentine pampa, with its flat plains and its unbroken horizons, can afford no such splendid sights of grazing cattle as southwest Virginia offers. The latter's limpid streams, noble, spreading oaks, and rounded mountains form magnificent backdrops for a hundred scenes and make the grazing of "a thousand cattle on a thousand hills, knee-deep in June," memory pictures one can never forget.

In the make-up of her population, in the character of her soil, and in her geographical location, Virginia is a composite of eastern America. A large percentage of her people in the Shenandoah Valley and southwest Virginia are of Scotch-Irish, German, Swiss, and Dutch ancestry. Coming in through the port of Philadelphia between 1700 and 1775, the first generation of these people settled in eastern Pennsylvania and in the Shenandoah Valley. Many of the second generation of those who stopped in Pennsylvania moved southward when they reached maturity. They brought with them the customs, the viewpoints, the agriculture, the industries of eastern Pennsylvania. So beyond the Blue Ridge to-day we see the diversified farming characteristic of Lancaster, York, and Chester counties, in the Keystone State—wheatfields, cornfields, hayfields, orchards, and stock farms.

Piedmont Virginia, north of the James, takes to stock raising and general farming, but with large estates and gentlemen farmers as the rule, and small farms and overall farmers as the exception.

Southside Virginia's major notes in agriculture are corn and tobacco; its minor ones are cotton and peanuts.

Southwest Virginia is predominatingly given over to stock raising, while the Tidewater section above the James, once rich in perfectly tilled plantations manned by hundreds of slaves, has largely allowed its agriculture to pass, except for its trucking lands. A vast proportion of its once fine soil is now given over to old field and long-leaf pine timber. A large percentage of its population has drifted away or has found other means of livelihood.

VIRGINIA PRODUCTS MEET WORLD FAVOR AND FAME

The Eastern Shore is the truck garden of the State, and through its potato, berry, and early vegetable crops has given its two counties, Northampton and Accomac, first and second place among all the counties of the United States in the per-acre value of crops produced.

Virginia products have grown famous in both hemispheres. Makers of high-grade cigarettes in England advertise that they use the best bright Virginia tobacco in their manufacture, either pure or in mixture with choice Egyptian or Turkish.

Smithfield hams figure widely in gastronomic literature, as do Lynnhaven and Seatag oysters, Norfolk spots, Suffolk peanuts, Albemarle pippins, and old Virginia winesap apples, Eastern Shore potatoes, Nomini tomatoes, and Hanover watermelons.

The Eastern Shore produces 40 per cent of the entire country's early potatoes, Frederick County ships to foreign countries more apples than any other county in America, and Suffolk is the greatest peanut market in the world.

The peanut came into favor during the Civil War. Before that time the native "goober" had little vogue; but the soldiers, to whom short rations was the usual experience and enough to eat the occasional, made fast friends with the peanut, and when they came back home they began to plant it in earnest (see page 412).

Anglo-Saxon civilization acquired its first friendship with "My Lady Nicotine" in Virginia, and tobacco became the "current money" of the Virginia realm. The clergy was paid so many hundredweight of tobacco, and court fines were levied in terms of so many pounds of the same

© National Geographic Society Natural Color Photograph by Charles Martin

THE BELFRY AT POHICK, ERECTED IN MEMORY OF WASHINGTON

Among the rectors of old Pohick, near Alexandria, was "Parson" Weems, whose stories of Washington's boyhood, including the immortal cherry-tree episode, have inspired millions of American youths. Dr. Charles Green, who was a physician as well as a doctor of divinity, ministered both to the bodies and the souls of the Washington family (see also Color Plates II and III).

© National Geographic Society Natural Color Photograph by Edwin L. Wisherd

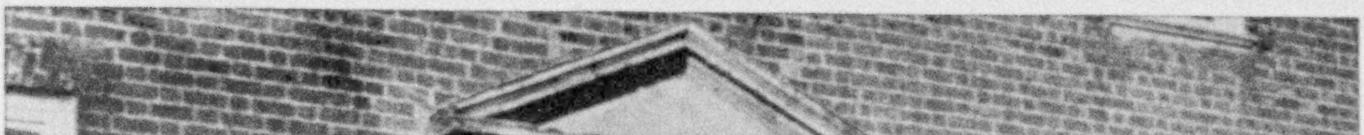
THE BAPTISMAL FONT AT POHICK CHURCH HAS BEEN REINSTALLED

Friends and relatives from near and far were invited to the colonial baptismal ceremony. One of George Washington's ancestors considered his son's baptism of sufficient moment to take precedence over a summons from the Governor of Maryland for his appearance at Provincial Court. This old stone font of Pohick Church was lost for many years. It was finally discovered in a farmyard where it had been doing duty as a watering trough.

© National Geographic Society — Natural Color Photograph by Jacob Gayer

HISTORY HAS MARKED THIS OLD HOUSE ON THE BATTLEFIELD OF BULL RUN

In the exciting days of '61 and '62 many wounded soldiers were brought here for treatment, without regard to the blue or gray of their uniforms.



© National Geographic Society — Natural Color Photograph by Clifton Adams

AS WORSHIPERS LINGERED AFTER CHURCH SERVICES A CENTURY AND A HALF AGO

Pohick church, erected in 1772, stands on a site chosen by George Washington. During the Civil War its interior was torn out and the structure converted into a stable. Its restoration was undertaken in 1895 (see also Color Plates I and II).

© National Geographic Society

Natural Color Photograph by Charles Martin

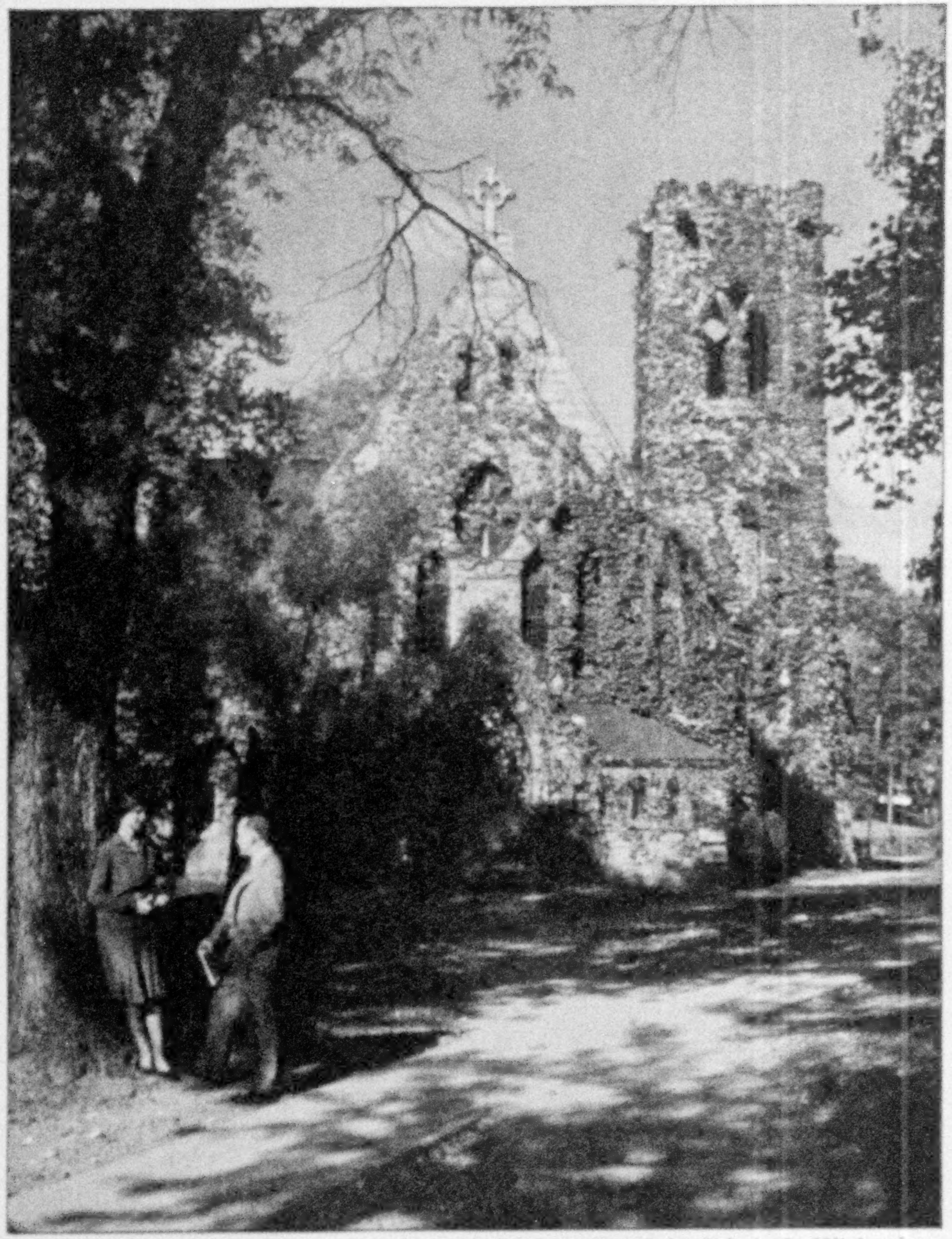
FROM ARLINGTON'S PLEASANT HILLS ONE OF THE FAIREST PROSPECTS OF THE NATION'S CAPITAL UNFOLDS

L'Enfant's paper city of 1791 has developed into one of the show places of the world. The beautiful Lincoln Memorial (center), lofty Washington Monument (right), and stately Capitol Building (extreme right) are among the finest of Washington's many magnificent structures. At one time Arlington was a part of the Federal District, but in 1846 the Virginia sector was receded to the mother State.

© National Geographic Society Natural Color Photograph by Charles Martin

IN THE COSTUMES OF KENMORE'S HEYDAY

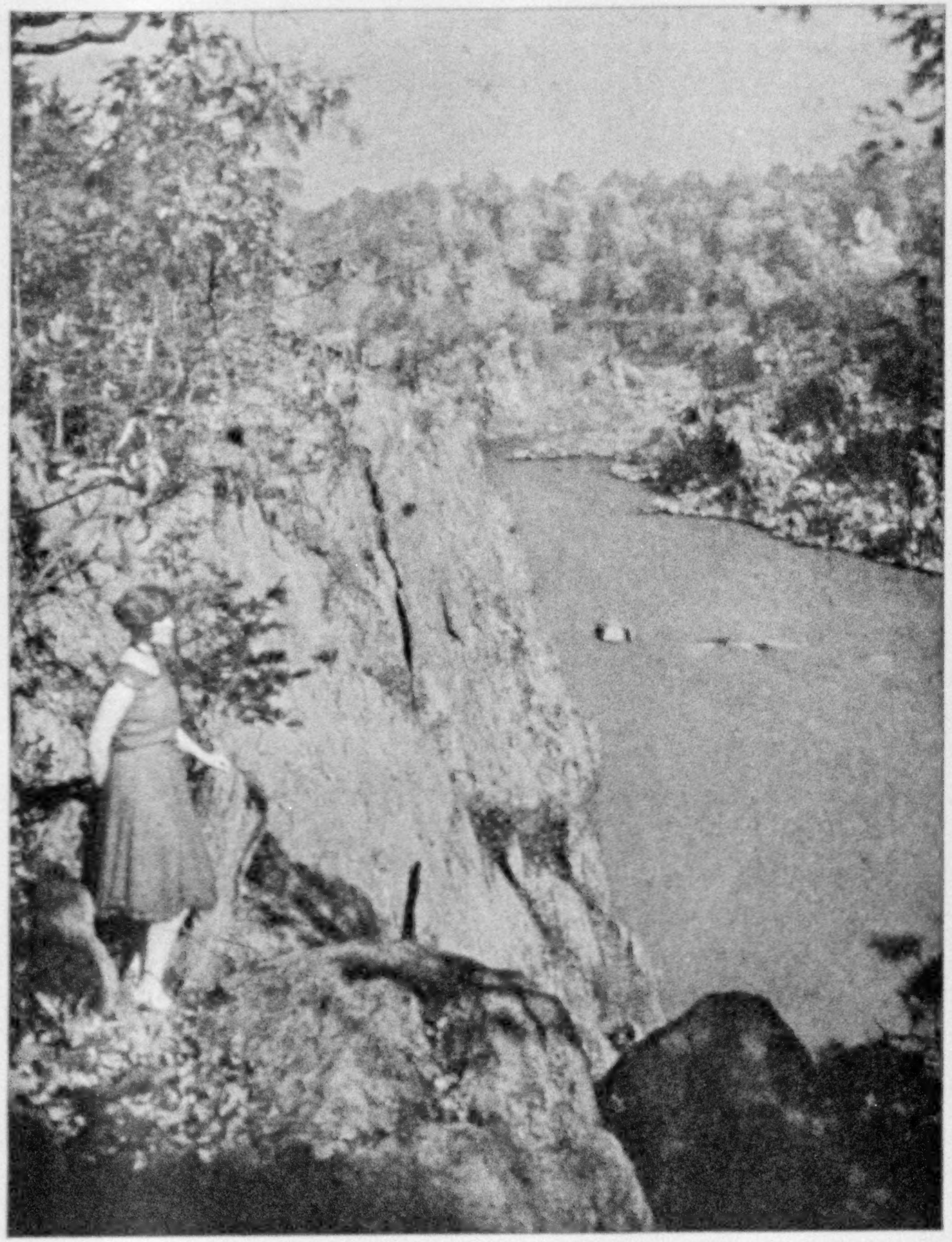
This fine old home of Betty Washington, sister of the General, has been rescued from ruin to become one of Fredericksburg's many shrines.



Natural Color Photograph by Edwin L. Wisherd

VIRGINIA'S VINE-CLAD UNIVERSITY CHAPEL

Thomas Jefferson was in a real sense father to the University of Virginia. He planned the curriculum, designed the buildings and was its first rector.



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THE PALISADES OF THE POTOMAC

From the banks of the Potomac to the waters of the Dan, and from the crest of the Alleghenies to the shores of Accomac and Northampton, the Virginia panorama offers a thousand engaging contrasts.

Natural Color Photographs by Clifton Adams

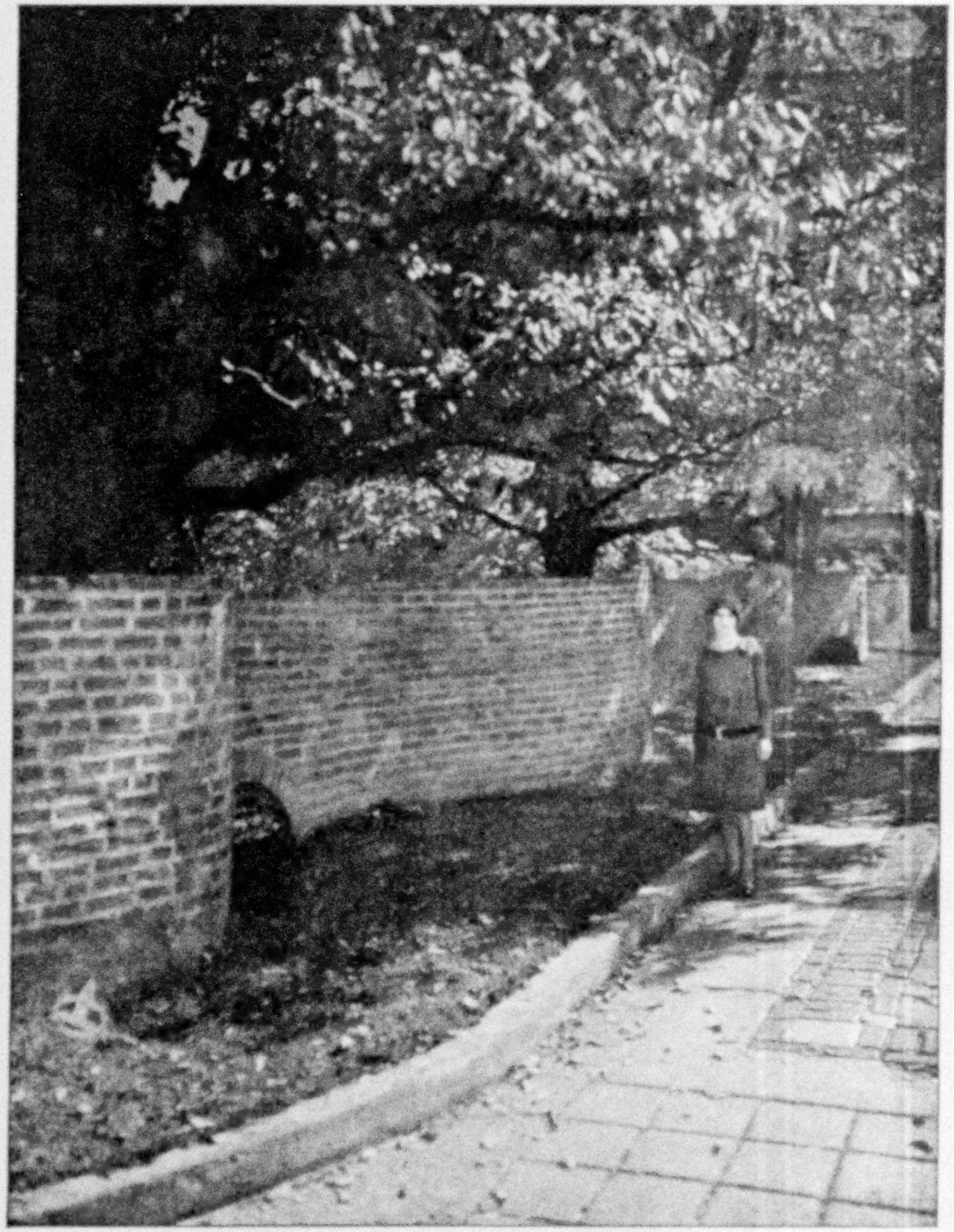
A BELLE STEPS OUT OF THE LONG AGO

Grand days were those when the Evelyn Byrds, the Martha Dandridges, and the Nelly Custises of Virginia cavalier society reigned as uncrowned queens.

© National Geographic Society

BLOSSOM TIME AT WINCHESTER

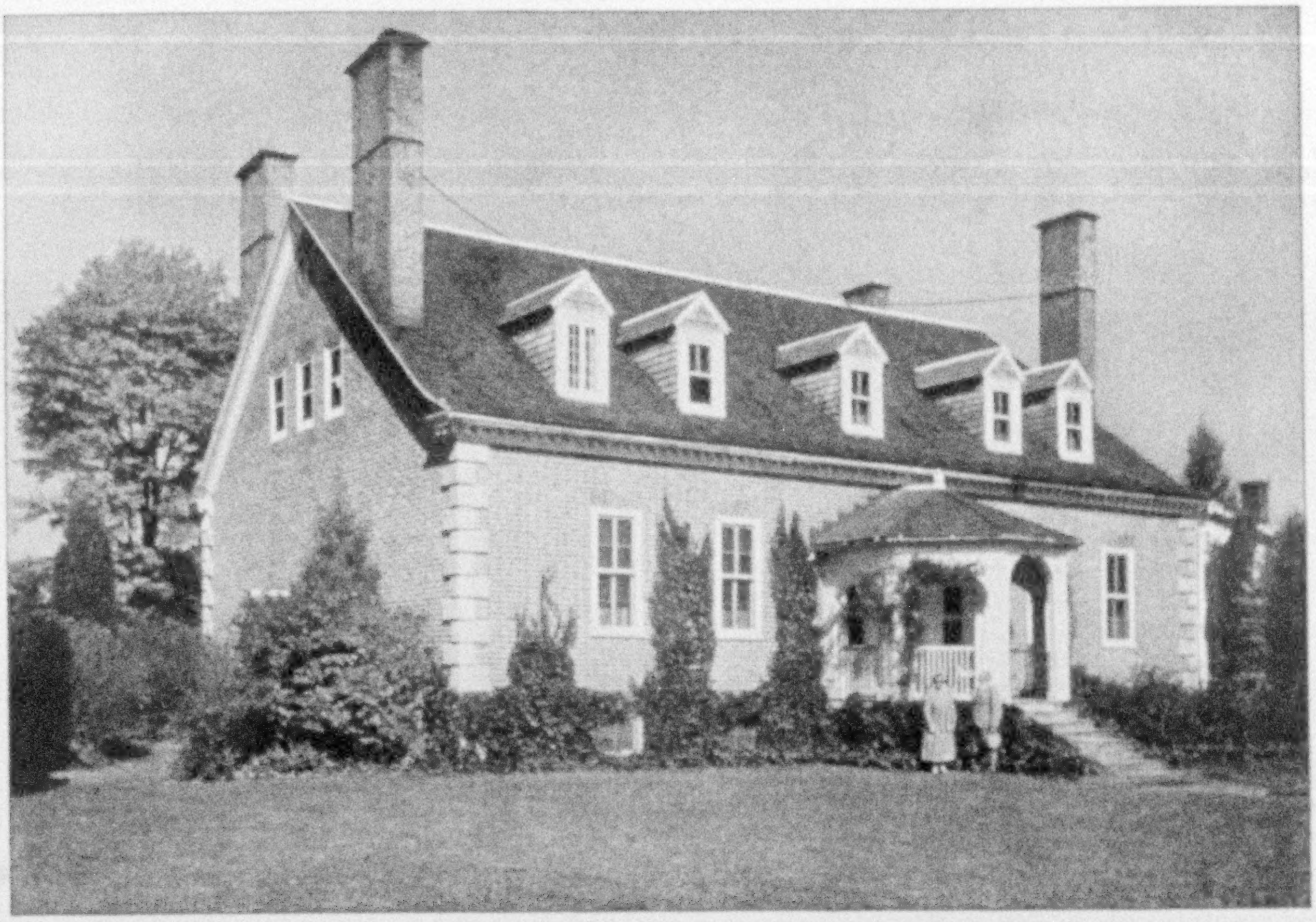
The Valley of Virginia produces apples in bountiful quantity and unsurpassed quality. The magic of spring offers a fragrant mantle of delicate pink and white blooms which attract visitors from afar.



Natural Color Photographs by Charles Martin

JEFFERSON DESIGNED THIS UNDULATING WALL

Serpentine inclosures are economical of material, since they permit the construction to be only a single brick thick. This one is at the University of Virginia, but they occur on many old Virginia estates.



GUNSTON HALL, HOME OF GEORGE MASON

None of the famous old mansions of Virginia has been restored with a deeper sympathy and a finer understanding than has this colonial residence of the author of the Bill of Rights.

© National Geographic Society Natural Color Photographs by Charles Martin

RICHMOND HAS DEDICATED A BEAUTIFUL GARDEN TO THE MEMORY OF POE

Admirers of the great poet have rescued the little dormer-windowed stone cottage where he lived in his "Literary Messenger" days. They have converted it and its garden into the Edgar Allan Poe Shrine.

commodity. John Rolfe, the husband of Pocahontas, imported seeds of *Nicotiana tabacum* from the West Indies in 1612 and began the cultivation of this species. By 1700 the crop had reached a total of 18,000,000 pounds a year.

While other States outrank the Old Dominion in the amount of tobacco produced, in the favor in which her crop is held in the markets of the world she yields to none. The records of the Bureau of Foreign and Domestic Commerce disclose that she leads all of the States in the export of the seductive leaf.

These statistics also reveal that while the State's farm lands are valued at a third less per acre than those of the country as a whole, her crops are worth nearly one-half more per acre than those of the United States at large. Reasonable prices for highly productive land is the explanation of this striking note in Virginia's agricultural position in the sisterhood of States.

The first iron works in America were established near Richmond, and the first Governor Byrd, in colonial times, laid special stress upon iron-making activities. George Washington's father was largely engaged in mining and shipping iron ore, and Thomas Jefferson established and ran a nail mill.

The Tredegar Iron Works and the Trigg shipyard of Richmond were famous before and during the Civil War, and the Gallego and Haxall flour mills of that city were leaders in their day and made Richmond a sort of ante-bellum Minneapolis of the South.

But the Civil War wrecked Virginia's industrial development, and its present renaissance is one of the striking elements in the State's economic history.

In 1900 the output of the Old Dominion's factories was valued by the Federal Census at a shade more than $100,000,000. By 1925 the value had risen to a shade less than $600,000,000, and it is expected to pass the billion mark in 1930. In 1900 the bank deposits of the State amounted to only $42,000,000, while in 1927 they had risen to $671,000,000.

The big rayon plants in operation and under construction near Richmond, at Hopewell, at Roanoke, at Covington, and at Waynesboro, and the huge plants of the Allied Chemical and Dye Corporation at Hopewell are calling for hundreds of millions of dollars of new capital and for tens of thousands of factory workers.

Waynesboro, until recently a town of 5,000 inhabitants, with a stove foundry, several small woodworking establishments, a creamery, and an apple-products establishment, is being made the center of a big acetate rayon industry which will use cotton linters. The units planned by the Du Pont interests there will give employment to nearly 10,000 wage-earners.

HAMPTON ROADS AMERICA'S SECOND PORT

Hampton Roads, which includes Norfolk and Newport News, has become the world's leading coal port. In a recent year it handled 27,500,000 tons, more than 13,000,000 of which moved to New England. It is also the world's leading tobacco port, handling more than $100,000,000 worth of leaf tobacco annually. It ranks second only to New York in the value of its exports and in the tonnage of its shipping. Its foreign trade increased nearly twelvefold in a single decade.

The Hampton Roads Port Commission recently was established to consolidate the port authority of Norfolk, Newport News, Portsmouth, Hampton, and Suffolk, and to develop their shipping facilities as the port of New York has been developed. Eight trunk-line railroads serve this metropolitan district and sixty steamship lines receive and discharge cargo there.

NEWPORT NEWS SOLVES THE SHIPBUILDING SITUATION

The experience of the Newport News Shipbuilding and Dry Dock Company is an illustration of the readiness of Virginia industry to face new conditions as they arise. Its shipyards were established by the late Collis P. Huntington. In the plant there stands a huge granite block with an inscription to the effect that the yard will build good ships, at a profit if possible; but, whether at a profit or at a loss, it will build good ships.

When the Conference on the Limitation of Armament put an end to the building of battleships in its yards, the Newport News plant readjusted its operations, substituted car and large machinery contracts for warship orders, and weathered the gale. It recently has built the *California* and the *Virginia*, the latter the largest

Photograph by H. C. Mann

A SANDY SEASCAPE NEAR CAPE HENRY

From the verdure-clad crests of the Alleghenies to the sandy shores of the Atlantic, the Virginia scene presents a constant succession of contrasting pictures. A day's motor trip may bring them all to view.

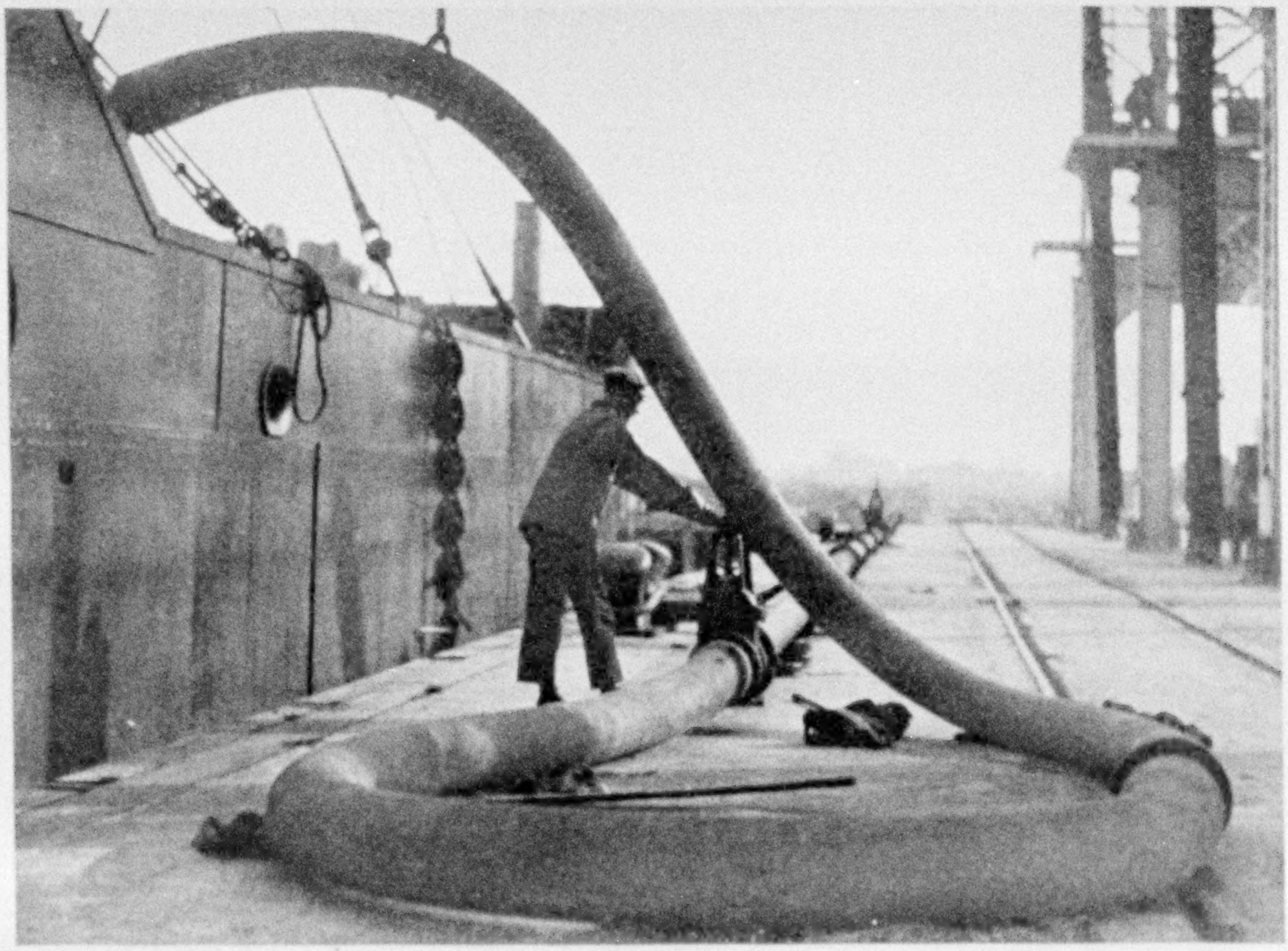
Photograph from George W. Koiner

EXPORT CATTLE AT ELK GARDEN, RUSSELL COUNTY

So succulent is the blue grass of southwest Virginia that the finest beeves are shipped from the pasture to European markets. Solid trainloads frequently move from a single ranch (see, also, text, page 424).

FISHING AT VIRGINIA BEACH

Lynnhaven oysters, Norfolk spots, and Tangier crabs head the list of the State's sea-food products

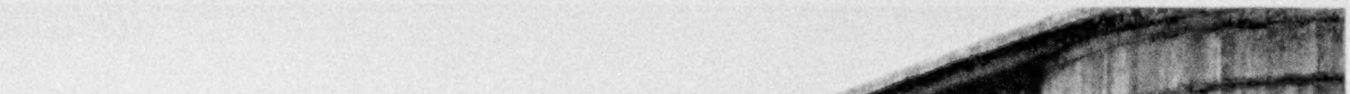


A TANK STEAMER UNLOADS MOLASSES AT NORFOLK

Giant pumps draw the viscid blackstrap through the huge flexible pipe into tanks that resemble those used in oil storage. Whole fleets are devoted to carrying blackstrap from the sugar factories of Cuba. This onetime waste product now has a hundred uses—in the making of table syrup, industrial alcohol, and yeast, in the manufacture of artificial flowers, bay rum, chewing tobacco, dental gold, fireworks, mirrors, shoe polish, tinfoil, and other products.

CURING VIRGINIA HAMS AT SMITHFIELD

This quaint little town below the James advertises itself through its hams from peanut-fed hogs. The hams must be cured with hickory smoke and allowed to age from two to four years.



Photograph by William D. Boutwell

A BATTERY OF VINEGAR VATS: WINCHESTER'S WRY FACE

These vats hold half a million gallons of vinegar, in the making of which apples are sent through crushers and ground into pomace. This, in turn, is spread in layers on frames, each layer wrapped in coarse jute cloth and all of them resting on the platform above the big plunger of the hydraulic press. Under heavy pressure the cider is squeezed out, pumped into the vats, allowed to become hard, and then turn to vinegar.

OAK HILL, THE HOME OF JAMES MONROE IN LOUDOUN COUNTY

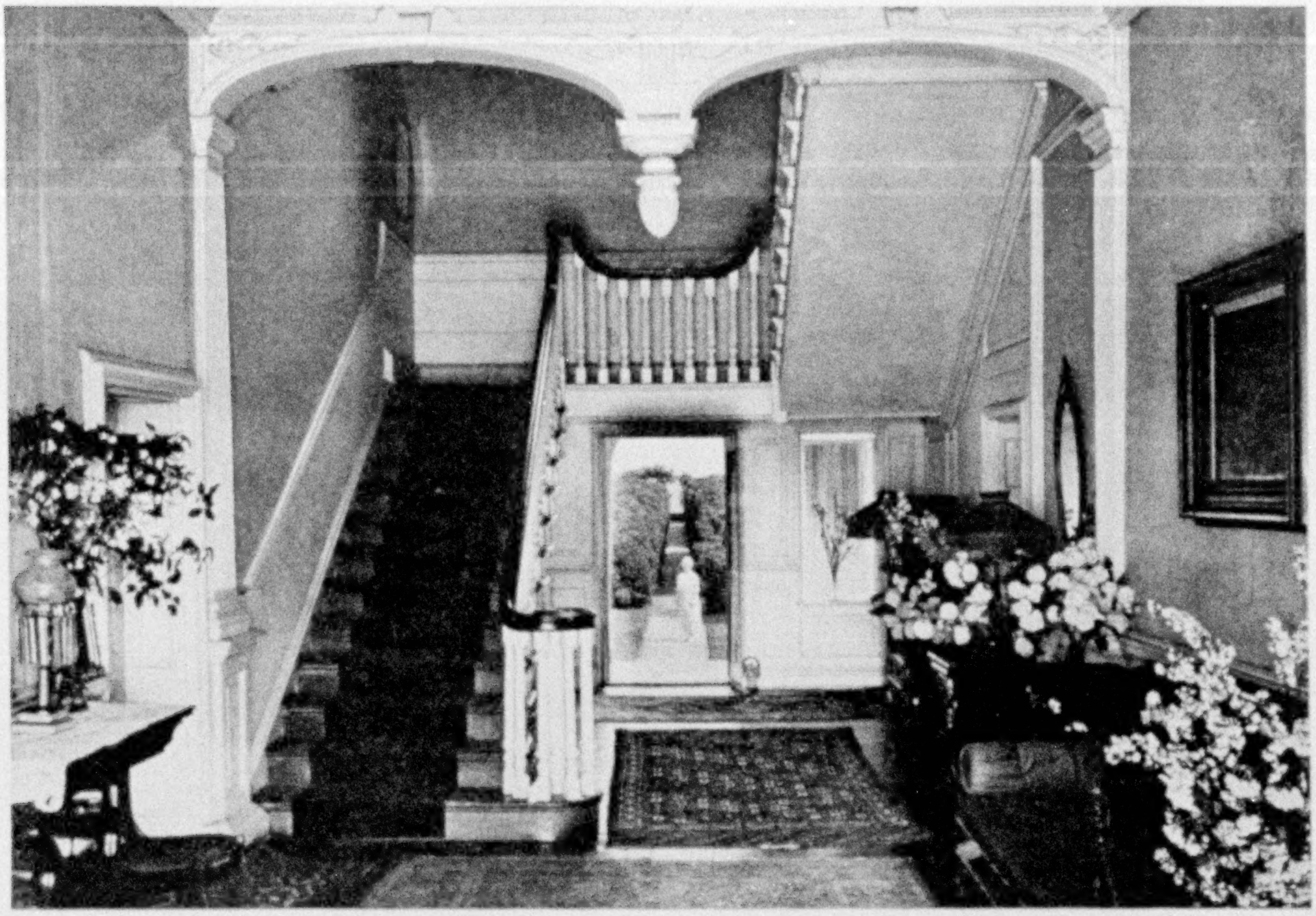
Monroe had several homes. One of these, Ash Lawn, was in easy driving distance of Montpelier (see page 464) and Monticello, and the three presidential cronies were often together. Oak Hill was built by Monroe while President of the United States, and in a letter to his manager he gave instructions for the poplar-lined avenue leading from the house to the public road.

passenger ship ever constructed in the New World (see page 406).

The versatility of Virginia's manufacturing activities is revealed by the fact that in Richmond are to be found the largest woodworking plant in the world, the largest baking-powder factory, and the largest cigar factory. Petersburg has the largest trunk and traveling-bag industry, Altavista the largest cedar-chest factory, and Pamplin the biggest clay-pipe kilns.

After the Civil War the majority of the best young men of scores of counties, finding no opportunities in the devastated districts about them, moved away from Virginia. Thousands went to New York, Chicago, Philadelphia, Washington, and Baltimore. Other thousands heeded Horace Greeley's advice and went west to become prosperous farmers. All through Ohio and Indiana, Illinois and Missouri, Iowa and the Dakotas are settlements predominantly peopled by Virginians and their descendants.

This loss of the adventurous pioneering element of its population was one of Virginia's sorest handicaps. In 1900 there were 455,000 more Virginians living in other States than there were people of other States living in Virginia. In recent



Photograph by Edwin L. Wisherd

LOOKING DOWN THE FAMOUS BOX WALK AT GUNSTON HALL

The present-day chatelaine of the famous home is seen through the doorway (see, also, illustration, page 441, and Color Plate VIII).

years, however, the trend has been in the other direction.

Few States have maintained their old stock so pure. Lord Balfour, on one of his trips down the James, remarked that he found Old England at its best in that region. Lady Astor tells her English friends that even they are not as purely English as the people of Piedmont Virginia. "We are undiluted," she says.

As one wanders up the James, journeys up the Rappahannock, follows the Virginia shore of the Potomac, or motors along the eastern foothills of the Blue Ridge, the hundreds of fine old estates one discovers, the thousands of delightful people one meets, the character of the activities one sees, corroborate her testimony.

What a galaxy of gems of residential architecture greet us as we ramble around the Commonwealth! The history of America, indeed, could be written in large part from the records of those who have lived in these houses and shared their hospitality.

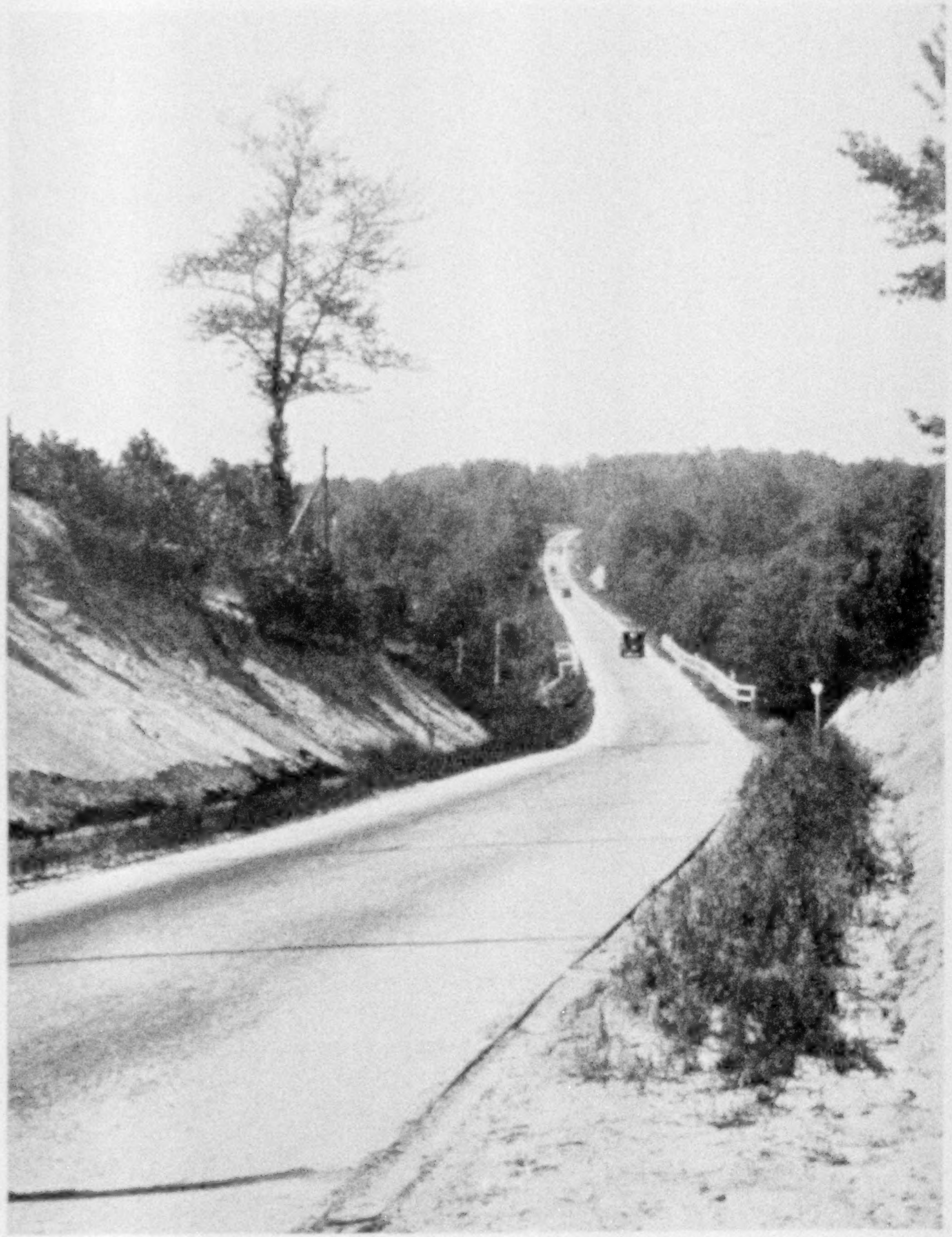
Mount Vernon, the home of homes in American history, has been described and pictured with the warm hues of color photography in these pages.* Monticello, second only to Mount Vernon in its sacredness as a shrine, unrivaled in its perfection of line, angle, and curve, unsurpassed in the magnificence of its situation, is in this issue described by a pen worthy of the task (see pages 481 to 503). Arlington, with its memories of Robert E. Lee and its Valhalla of soldier dead round about, likewise has found its place in the pages of this magazine.†

CHARMING OLD WESTOVER

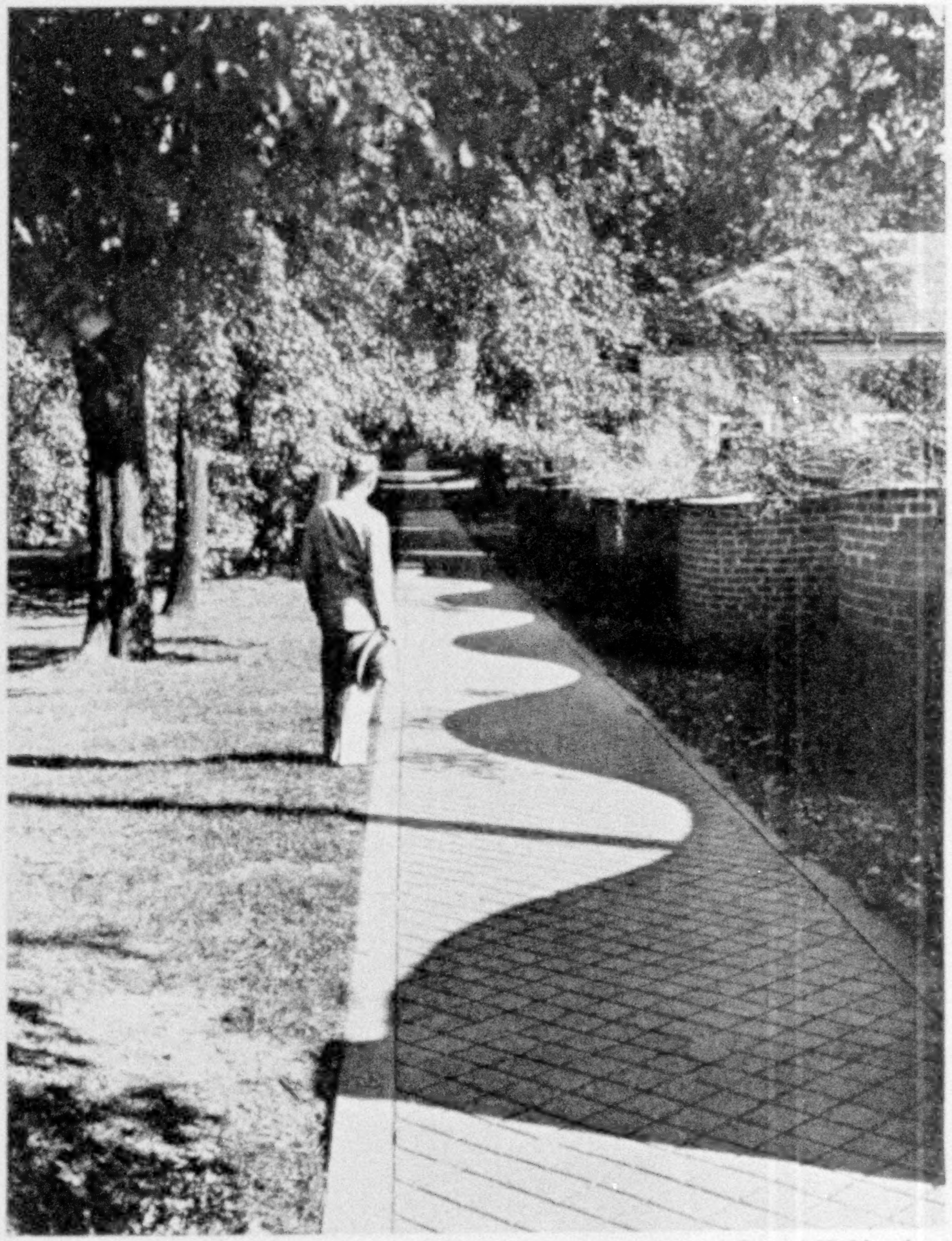
But Westover—what fairer spot is there than this fine old home, with its memories of the second William Byrd and his fair daughter Evelyn? The emerald clasp of the golden necklace of the James, it has been called. As one sits on that glorious lawn, with its magnificent trees, two centuries old, history recreates itself.

* See "The Home of the First Farmer of America," by Worth E. Shoults, in the NATIONAL GEOGRAPHIC MAGAZINE for May, 1928.

† See "Fame's Eternal Camping Ground," by Enoch A. Chase, in the NATIONAL GEOGRAPHIC MAGAZINE for November, 1928.



A STRETCH OF NO. I HIGHWAY OF THE UNITED STATES, BELOW FREDERICKSBURG



Photograph by Gerard Hubbard

SERPENTINE WALL AND SHADOW, UNIVERSITY OF VIRGINIA (SEE, ALSO, COLOR PLATE VII)

Photograph by Charles Martin

THE BOXWOOD WALK AND GARDENS AT GUNSTON HALL

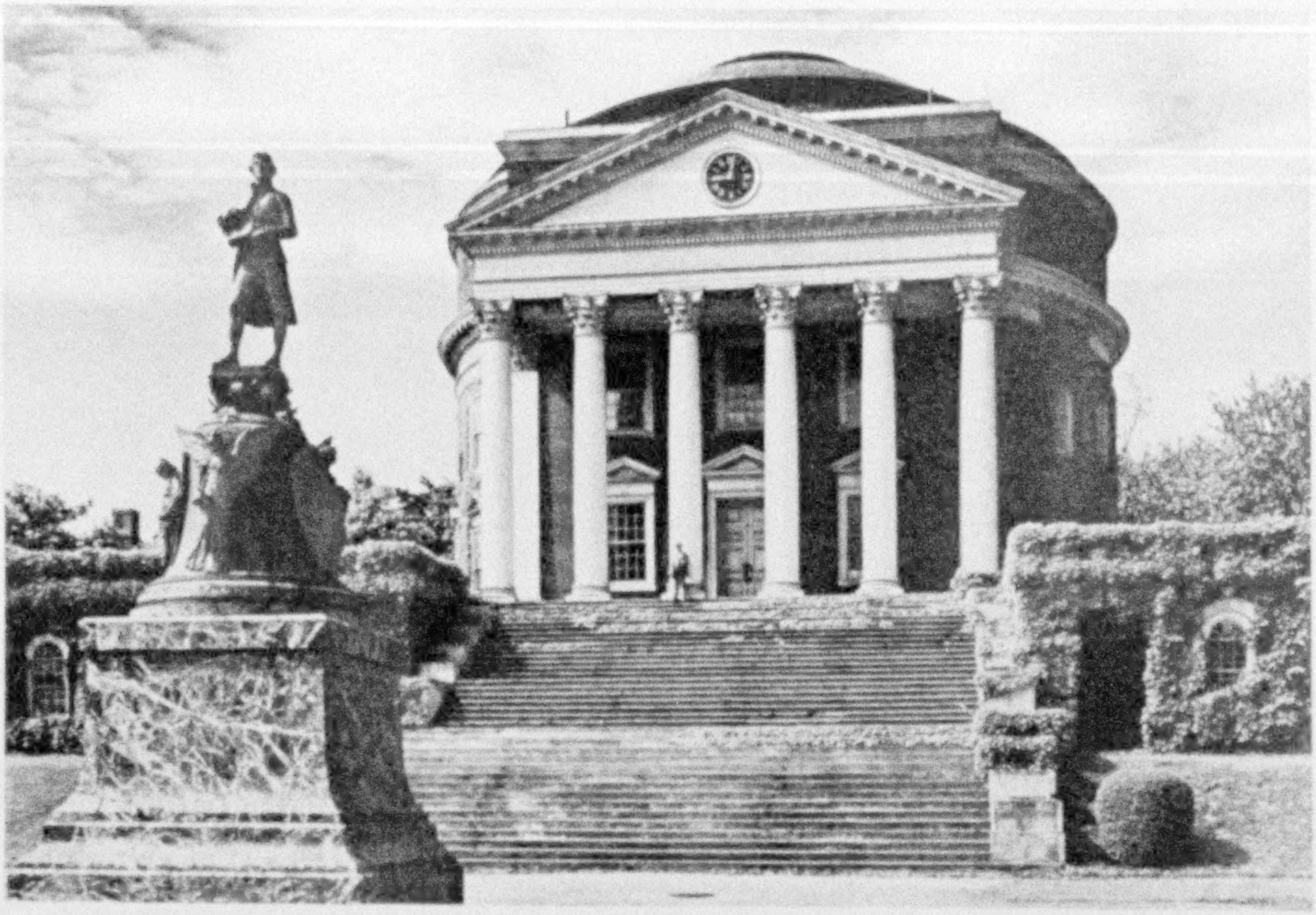
This is the view of the gardens and the river from the front of the house, shown in Color Plate VIII, upper. The box in the foreground and bordering the walk down to the pergola is among the finest in America. It is so tall and its foliage so dense that one may press aside the branches, creep in, and be effectively hidden from any outside eyes (see, also, illustration, page 439).

APPLES, APPLES EVERYWHERE

But these are only the culls of the Shenandoah Valley crop, and must be content to become "pie timber," cider, and vinegar (see, also, illustration, page 437). Millions of barrels of prime fruit annually cross the sea to England and the European Continent.

BRANDON, ONE OF THE ORIGINAL HIVES OF THE HARRISONS OF VIRGINIA

First granted to John Martin, who crossed the seas with Capt. John Smith, this fine old estate later passed to John Sadler, William Barbour, and Richard Quiney. The latter's brother married Judith, a daughter of Shakespeare. Nathaniel Harrison acquired it in 1720. On one of the chandeliers in the drawing-room hangs a small gold wedding ring. It has hung there so long that the memory of man knoweth not whence or why. After more than two centuries in the Harrison family, Brandon has passed to the ownership of another Virginian, who is leaving nothing undone for its preservation.



Photograph by Charles Martin

THE ROTUNDA OF THE UNIVERSITY OF VIRGINIA

"The greatest surviving masterpiece of the classical revival in America, the most magnificent architectural creation of its day on this side of the Atlantic," is the description given of the University of Virginia by a noted art critic. From the Rotunda, a reproduction of the Roman Pantheon, which houses the University Library, to the Greek-porticoed Cabell Hall, extends a lawn flanked by stately columned faculty residences and graduate-student dormitories.

Courtly cavaliers in brilliant coats, flowing ruffles, satin knee breeches, and with silver shoe buckles, jeweled swords, and golden snuffboxes, gather there and pay court to lovely ladies with powdered hair, patches, fans, and dresses of flowered brocade, who come and go as in the days when William Byrd II was known as the Black Swan and Evelyn's beauty was the toast of two continents. We see again William Byrd III, in his scarlet regimentals, riding off to his command in the French and Indian War, or in his lordly coach-and-six with liveried outriders, going with his ladies to visit their neighbors at Shirley and Brandon and other seats of the "River Barons."

Then comes the Revolution, with its visiting burgesses to discuss the patriot cause; with its youthful Continental officers in their buff and blue uniforms to pay court to the fairest of the fair; with its gallant French officers to lay siege to the hearts of Virginia belles. It brings Benedict Arnold, the renegade; and Cornwallis arrives, in his turn, on his way to Yorktown and defeat.

And then comes the Civil War. McClellan uses it for his headquarters and enemy soldiers ruin its fences, trample its gardens, and leave it desolate.

The fine old mansion, chaste and beautiful in its design, mellowed to old rose in hue, lovingly restored by its present owners, stands in as rich a glory as in any period of its history, in the midst of its magnificent river-bordered, yew-and-elm-studded lawn (see pages 459 and 460).

Shirley is its neighbor up the river and Brandon down the stream. Who that has visited Shirley could ever forget this fine old three-storied, dormer-windowed, square-built mansion! For nearly two centuries it has sheltered hundreds who have played distinguished rôles in the drama of American history. Here came, to wed the lovely Elizabeth Hill, John Carter, son of "King" Carter of Corotoman, who owned a quarter of a million acres of Virginia's choicest land and built a dozen baronial

Photograph by Charles Martin

VIRGINIA HONORS HER "HANNIBAL OF THE NORTHWEST"

When Patrick Henry was Governor of Virginia and the Colonies were too poor to carry the Revolution across the Allegheny Mountains, George Rogers Clark raised a militia army and led it to the Mississippi Valley to hold Virginia's domain there. From the territory he saved have been carved the States of Ohio, Kentucky, Indiana, Illinois, Wisconsin, and Minnesota. This memorial to his achievements stands in Charlottesville (see, also, page 458).

seats for his many sons and daughters; and here also came Light Horse Harry Lee to woo and win the fair Anne Hill Carter.

BRANDON WAS NEVER FAIRER THAN NOW

Brandon, seat of the Virginia Harrisons—who can describe its simple beauty, with its two wings, its central structure connecting them, and its delightful garden, as it has been restored by its present owner? (See illustration, page 443.)

A list of the flowers that grace the river garden of Brandon would constitute a catalogue of all that are beautiful and capable of thriving in the kindly soil and genial climate of the James. They have been brought together in a way that combines the beauty of the formal and the charm of the unstudied. A 15-foot grass walk leads down from the old garden to the river, and as one looks from the front porch of the house down through the vista formed by the box and the trees of the lawn that was the old garden, the prospect of the James is unsurpassed.

On one occasion when I went to Brandon a dense smoke arose diagonally across the river, as we stepped ashore at the landing. Later, word was brought that Tedington, a neighbor of Brandon, was being destroyed by fire. Alas, too often come reports of such disasters to rare old homes of the long ago!

WHERE THOMAS JEFFERSON LEARNED HIS A-B-C'S

One wishes that he could take his readers on a ramble around Williamsburg, visiting the house of George Wythe, teacher of Thomas Jefferson, John Marshall, James Monroe, Henry Clay, and Edmund Randolph; stopping at Bassett Hall, where Tom Moore wrote "The Firefly"; and inspecting the John Page home, where the plot of Mary Johnston's "Audrey" was laid. And one regrets that space limitations permit only a mention of Clare-

A CABBAGE "PATCH" NEAR NORFOLK

The district around Norfolk and the Eastern Shore have become famous for truck crops. Only nine States in the Union outrank the Old Dominion in the per-acre value of crop land (see, also, text, page 424).

mont Manor, Upper Brandon, Weyanoke, Flower de Hundred, and Ampthill, colonial gems come down through the ages to us!

Above Richmond is Tuckahoe, with its one-room schoolhouse where Thomas Jefferson received his grammar-grade schooling; with its magnificent box maze, where he played hide and seek with his little Randolph cousins; and its H-type house—one wing for the family and the other for guests. On the upper James, too, stand Bremo and Elk Hill, Williamsville and Hickory Hill, rich in history and radiant with romance.

Between the Rappahannock and the Chickahominy are Poplar Grove, with its old tidal mill, which ground flour for Washington's army at Yorktown, Toddsbury, White Marsh, Sherwood, and Hampstead.

But the Northern Neck calls us. Here is Sabine Hall, with a situation as beautiful and a garden as delightful as can be found in all America. "King" Carter built it for his son Landon, one of whose wives was Maria Byrd of Westover.

At Mount Airy, with its three houses grouped about a central axis and connected by curved, covered ways, always have lived the Tayloes, intermarried with the Platers and the Ogles of Maryland. The race

A BROCCOLI FIELD NEAR NORFOLK

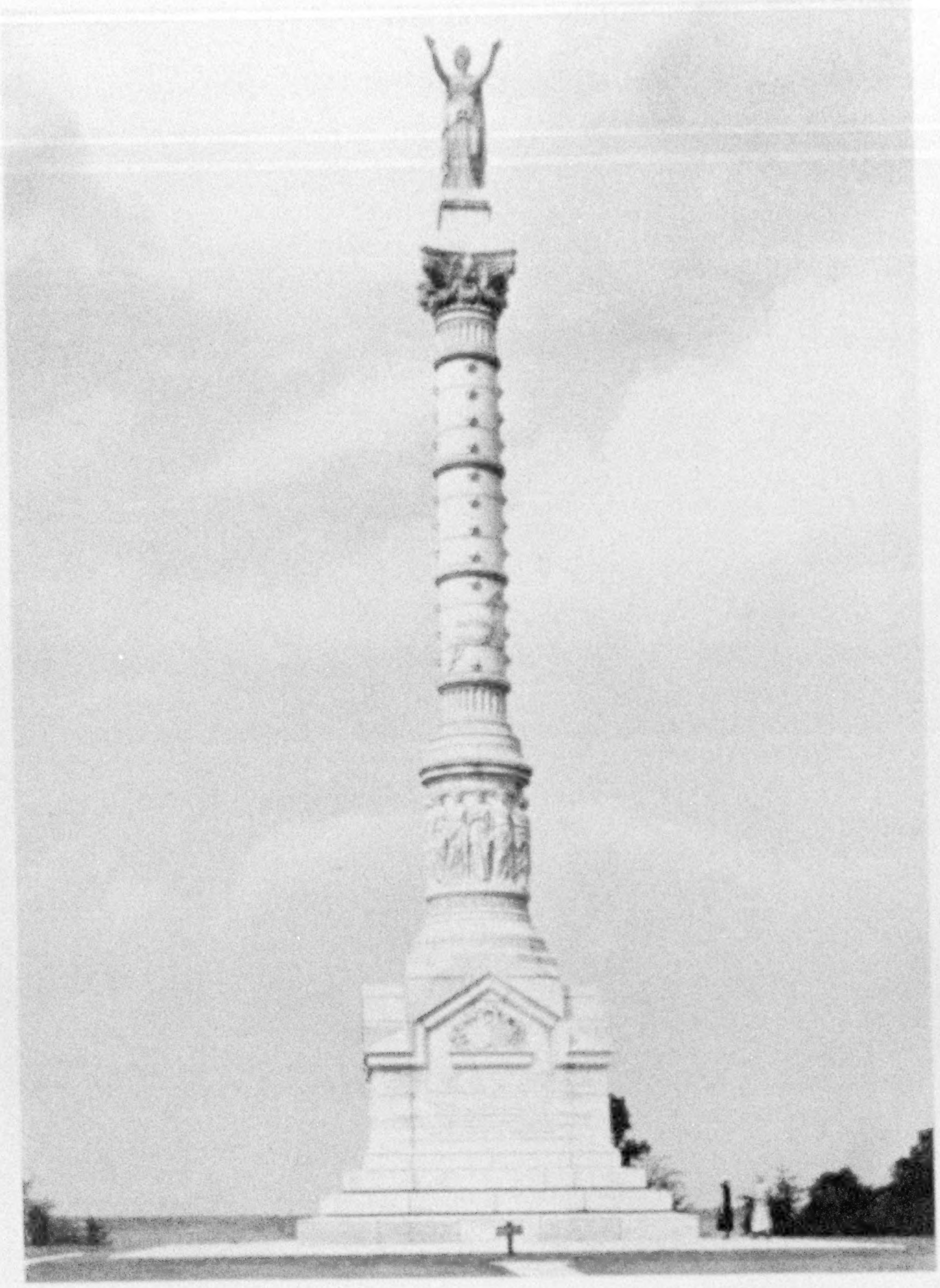
Scientific agriculture has been coming into its own rapidly in Virginia. Her boys and girls are winning honors in the cattle- and poultry-judging contests at the stock shows in Chicago and at Madison Square Garden, New York City. Her horses are excelled by none, whether on race tracks or in horse shows.

horses of Governor Ogle and those of Colonel Tayloe were the most famous of the early American turf, and Colonel Tayloe's race track brought the élite of two colonies together.

THE DEPARTED GLORY OF STRATFORD

Farther up the Northern Neck we come to Stratford, ancestral home of the Lees of Virginia. From its precincts went two signers of the Declaration of Independence. Descendants of the original owner have included governors of Virginia and Maryland, generals in four wars, members of constitutional conventions, and many another whose name graces the pages of American history. With its eight chimneys in two groups of four each, its great, high-ceilinged central hall, and its two wings, its English basement with a single story above, Stratford is unlike any other home in America. It was partly built with the gift of Queen Caroline to Thomas Lee, after his earlier house, with all its silver plate and moneys, had been destroyed by fire (see page 467).

To-day it stands as a pitiful relic of its one-time glory, but a Connecticut chapter of the Daughters of the Confederacy has recently acquired it and is making plans for its restoration to the aspect of days when Richard Henry Lee, Francis Light-



THE MONUMENT TO LIBERTY AT YORKTOWN

The triumph of General Washington's army is commemorated in this lofty shaft, erected by the Federal Government where Lord Cornwallis met his Waterloo (see, also, text, page 453).

foot Lee, Light Horse Harry Lee, and Robert E. Lee were born there.*

A SHRINE OF AMERICA AND MOTHERHOOD

On the north bank of the Rappahannock, at Fredericksburg, stands Chatham, the home of the Fitzhughs. There George Washington courted Martha Custis, there Robert E. Lee courted Mary Randolph Custis, there Abraham Lincoln visited the Army of the Potomac.

And across the river is the little home where lived Mary Washington, Mother of the First President. One loves to visit the shrine.

When George Washington reached maturity and left the Ferry Farm, where he had spent most of his tender years after leaving Wakefield, his sister Betty invited their mother to come to Kenmore, near by, which Fielding Lewis had built for his bride. Her answer was: "My wants are few. I feel perfectly competent to take care of myself." So she moved, instead, to the little cottage because "George thought it best."

History raises the curtain and gives us a glimpse of her life there. Her daughter frets at not hearing news of her brother George at the front, and is admonished that "the sister of the Commanding General should be an example of faith and fortitude." Lafayette visits her. He enters her garden by the side gate and finds her raking leaves and wearing a linsey-woolsey dress and a broad-brimmed hat over a plaited undercap. She takes his hand in both hers. "Ah, Marquis," she exclaims, "you have come to see an old woman. But I can make you welcome without changing my dress."

Speaking of this visit later, Lafayette declared that he had seen "the only Roman mother living at this day."

GUNSTON HALL RESCUED AND RESTORED

Kenmore, Betty Washington's home, with her mother's cottage, has now, like Mount Vernon, Monticello, and Arlington,

* Gen. Charles Lee, whose insubordination at Monmouth, New Jersey, nearly lost the battle for General Washington, and who was subsequently dismissed from the Continental Army, was not a relative of the Lees of Virginia.

THE NELSON HOUSE, AT YORKTOWN, WAS LORD CORNWALLIS'S HEADQUARTERS

When Gen. Thomas Nelson, later Governor of Virginia, was in command of American artillery at Yorktown he offered five guineas to the first of his gunners who would hit his house, saying that it meant nothing to him as long as it harbored a foe of his country (see text, page 453).

become a shrine set apart for all time by private munificence and public funds.

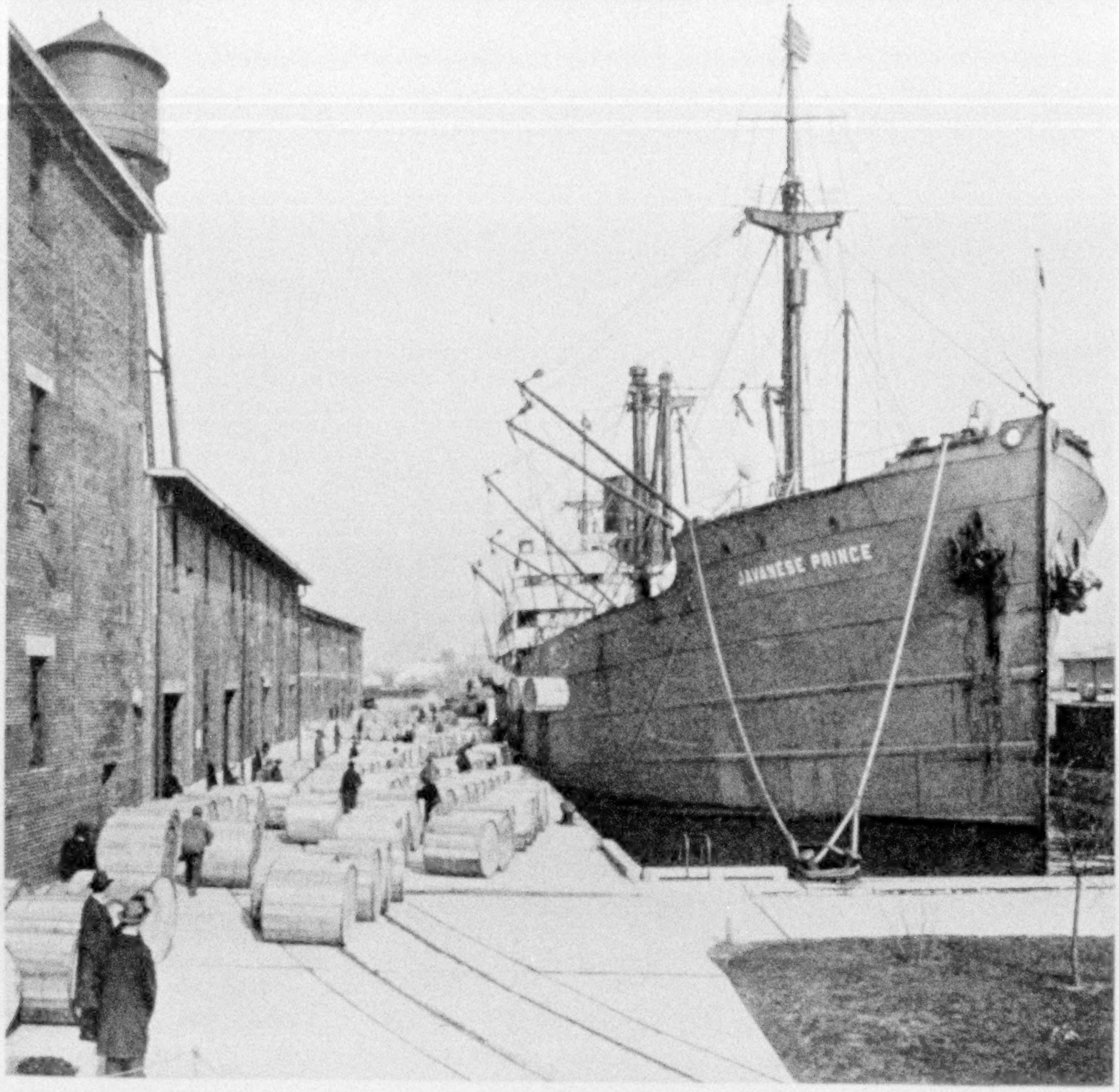
A few miles off the Richmond highway is Gunston Hall, the architectural gem that George Mason built and in which he spent the latter years of his life. Here it was that he drafted the Bill of Rights, which formed the basis of the first ten amendments to the Constitution of the United States. Its splendid box, its beautiful gardens, its fine colonial furniture, its perfect river view, all conspire to make it a bit of the past in its perfection, standing in the living present (see pages 439 and 441).

As one partakes of the rare hospitality of that place, sits where Washington and Lafayette, Jefferson and Madison sat discussing with its master the problems of war and peace and of nation-building, there is no escape from the happy feeling that here we can see Gunston Hall cared for just as George Mason might have cared for it were he alive to-day. A Nation's gratitude and a State's affection are due to its owners for the fine sympathy and understanding with which they have rescued the Hall from decay and preserved it as one of America's noblest shrines.

The Piedmont and the Valley, southwest Virginia and the Southside, likewise, have their fine examples of colonial homes endowed with a rich history.

Oak Hill and Oatlands, on the road from Aldie to Leesburg; Montpelier, home of James Madison, just outside of Orange, thoroughly restored; Morven and Mirador, Ash Lawn and Castle Hill, are all places where history, architecture, and landscape gardening unite to create enchanting scenes.

In the Southside, Red Hill is gone; fire destroyed this fine old home of Patrick



Photograph by Long

LOADING TOBACCO AT NORFOLK

Hampton Roads ships more tobacco than any other port in the world, and "Virginia bright" is known wherever Milady Nicotine is wooed.

Henry a few years ago; but still stands the old locust tree under which he was wont to sit and play his fiddle while enjoying the view out over the river to the distant hills of Halifax County. The brass locks that were given him as a law fee were saved from the catastrophe.

Hard by he sleeps and the boxwood that was the object of his solicitude remains among the most beautiful in America.

PRESTWOULD WON IN A CARD GAME

Not so many miles away is Prestwould, the fine old Skipwith estate. Once it was owned by William Byrd III, of Westover. Legend has it that upon one occasion Colonel Byrd and Sir Peyton Skipwith were together in Norfolk. It rained for days on end, and these two congenial compatriots insisted on sunshine in their lives, even though it was dismal out of doors. With the finest wines to alleviate the outer dampness, they played cards day after day, and when the skies finally lifted, Prestwould had been won by the turn of the cards. The records intriguingly tend to corroborate the legend, for in his will Sir Peyton speaks of "Prestwould, which I acquired from the Honorable William Byrd and others."

The collection of colonial furniture in this old mansion is regarded as the best and most complete in any house in Virginia.

Photograph from William C. Schroeder

TWO LITTLE FISHERFOLK AT OCEAN VIEW

No, children do not begin to cast their nets in Chesapeake Bay at such an age; they are simply showing us how it is done by their elders.

Photograph by William D. Boutwell

AN OLD TIDAL MILL AT POPLAR GROVE PLANTATION, NEAR MATHEWS

In its original state this mill supplied some of the flour used by Washington's troops before Yorktown. It was in operation until a few years ago. A dam across the entrance to the broad basin in the foreground made the tide rush through a narrow opening, turning the wheel one way as it went in and the other as it moved out. The plantation looks out over Mobjack Bay.

Photograph courtesy U. S. Forest Service

A CAMP SCENE IN THE SHENANDOAH NATIONAL FOREST

The Massanutten Mountain area and the Allegheny area between Frederick and Bath counties are included in the Shenandoah National Forest, where many attractive camps are being built by the U. S. Forest Service. Their use is free to all the people.

Overlooking the confluence of the Dan with the Roanoke, Prestwould, with its beautiful gardens, is a fair companion to such fine Southside estates as Berry Hill and Staunton Hill, from whose thresholds the Bruces of Virginia have gone out into all parts of America. James C. Bruce died on the day that Robert E. Lee surrendered, and announced on his deathbed that he took grim satisfaction in leaving the world on the day that meant the death of his class.

HUMBLER HOUSES THAT ARE WORLD SHRINES

But there are other structures in Virginia, as rude as the old colonial shrines were fine, which are not less sacred than they. Down in Gloucester stands a little cabin where Walter Reed, the liberator of the world from the menace of yellow fever, was born; up in Rockbridge is the old blacksmith shop where Cyrus McCormick, the emancipator of humanity from the toil of the harvest, built the first reaper; and over in Rockingham is the old farmhouse in which was born the father of Abraham Lincoln, the preserver of America, whose kindly spirit toward those who had seen the other side of the shield in the Civil War was so tragically stilled by an assassin's bullet.

Charles City County boasts of Berkeley, where William Henry Harrison was born, and Greenway, where John Tyler first saw the light of day.

Wakefield, where Washington was born, and Shadwell, where Jefferson was cradled, like the birthplaces of Monroe and Madison, Marshall and Clay, and of Zachary Taylor, are no more. Humble markers designate the spots in the case of Marshall, Jefferson, Madison, and Taylor; Wakefield is to be restored; but only tradition points to the sites of the hearthstones around which Henry Clay and James Monroe spent their first days. In Staunton is the Presbyterian manse where Woodrow Wilson was cradled.

At Mount Vernon sleeps the Father of his Country in a noble tomb; on the slopes of Monticello repose the ashes of Thomas

A HAMPTON INSTITUTE SOCIAL WORKER

Hampton Institute students go out among the poor of their race, whether in lowly cabin, lonely poorhouse, old soldiers' hospital, or town jail, to hold services of prayer and song and to bring a word of cheer. Indians are also admitted to the school (see text, page 469).

Jefferson; in a little graveyard at Montpelier, kept in repair by the present public-spirited owner of that imposing estate, lie James Madison and his lovely wife. In a single sacred acre in Hollywood Cemetery, in Richmond, are the graves of James Monroe, John Tyler, and Matthew Fontaine Maury, the "Geographer of the Seas." At Lexington rest Robert E. Lee and Stonewall Jackson in the last long, dreamless bivouac.

MARKING VIRGINIA'S BATTLEFIELDS

The Virginia Conservation and Development Commission has undertaken to mark all the hundred and one shrines along the highways of the State that are of national interest, so that the motorist need not roll along all unconscious of the sacredness of the scenes about him. When the program of marking is complete, a a journey in Virginia will have the fascination of a personally conducted tour, and history read on the ground where it was made will take on a new and richer meaning.

In addition to the marking of the historic places along the highways, steps are being taken by the national, State, and local governments and by historical associations to mark the battlefields of the Old Dominion.

Yorktown, where Liberty was made a fact in the world and where Cornwallis surrendered, ever will be a shrine of the American people. The Moore House, where the surrender terms were signed; the Nelson House, whose own master, Gen. Thomas Nelson, ordered it shelled, saying as he did so that it meant nothing to him as long as it harbored an enemy of his country; the Surrender Field, where the British stacked their arms and received their paroles; the fortifications that served two wars—all these are there.

Bull Run is reached on the Lee Highway. The old Stone House, with a cannon ball in its front wall, stands as it did when the flames of war swept around it (see Color Plate III). The old Henry field bears markers showing where the tide turned in the battle fought there.

The field of the second battle is a mile farther along the turnpike. A Confederate

THE OLD COVERED BRIDGE CLINGS ON FROM THE PAST

Photographs by Charles Martin

A SACRED ACRE AT HOLLYWOOD CEMETERY, RICHMOND

The wrought-metal tomb in the center is that of President Monroe. At the left, the tall monument with the bronze bust marks the resting place of President Tyler. At the extreme right is the monument over the grave of Matthew Fontaine Maury, the "Geographer of the Seas."

ACRES OF BLACK DIAMONDS

A section of one of the terminal coal yards at Norfolk, where the cars must stand in line to be dumped. The dumping equipment is shown in the illustration on page 456.

cemetery, a New York regimental monument, and a few other markers, together with a bronze tablet at Groveton, are all that speak to the passing motorist of that bitter day in '62.

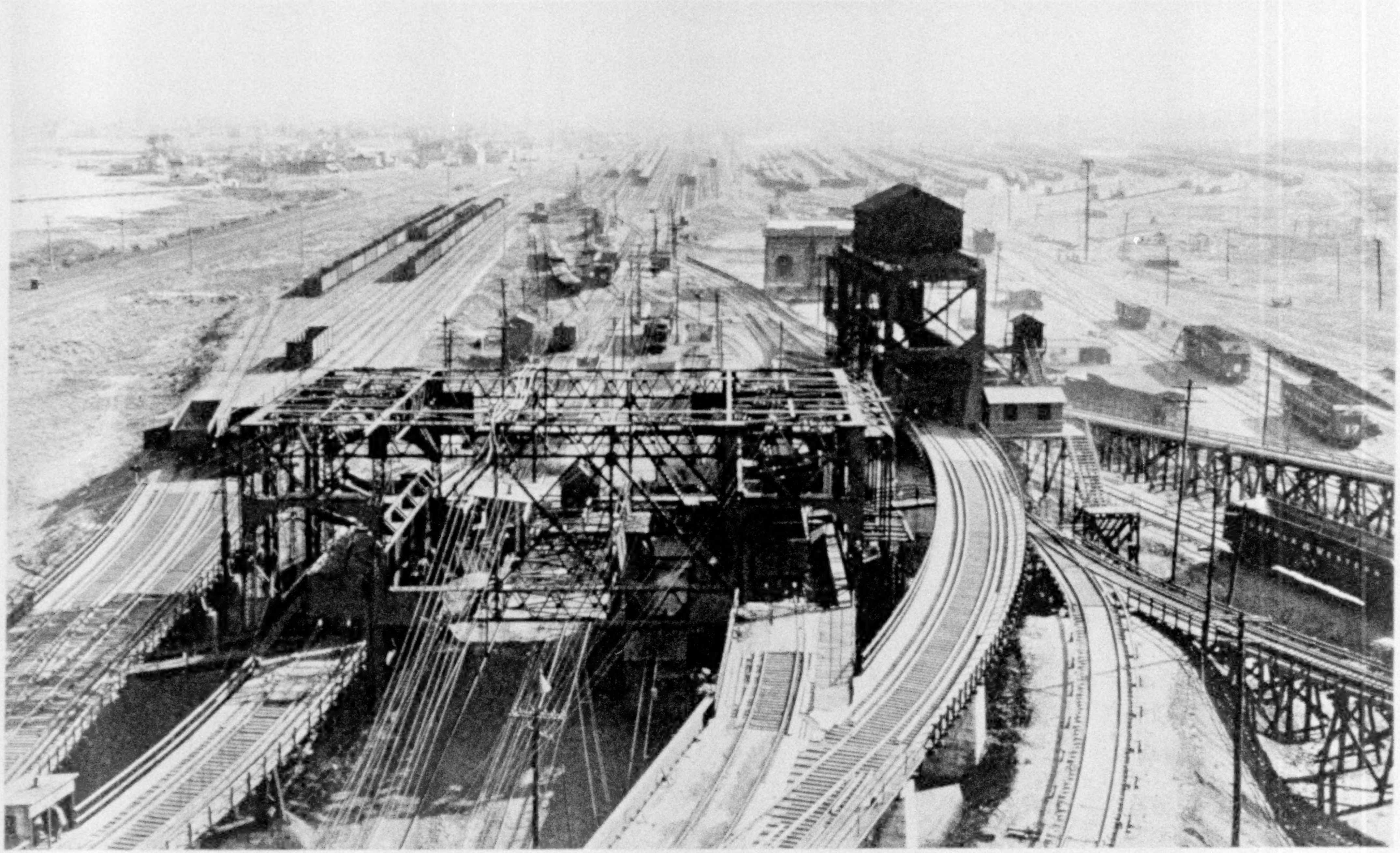
THE FREDERICKSBURG AND SPOTSYLVANIA COUNTY BATTLEFIELDS MEMORIAL ESTABLISHED

Cedar Mountain battlefield lies on the road from Culpeper to Orange. A few small monuments stand here and there, but not many who cross the peaceful little Cedar Run realize that it once ran red with the blood of thousands who fought under Jackson and Pope in that sanguinary conflict.

It is when we come to that great quintet of struggles which occurred within the confines of Spotsylvania County—Fredericksburg, Chancellorsville, Salem Church, the Wilderness, and Spotsylvania Courthouse—that we realize the heroic proportions of the campaigns of the Army of the Potomac and the Army of Northern Virginia. In that series of battles more men fought, more men were killed and wounded, than in any other series of battles in any single county in America. The combined casualties exceeded 100,000.

The Congress of the United States in 1926, on the recommendation of President Coolidge, authorized the establishment of a National Military Park, to be known as the Fredericksburg and Spotsylvania County Battlefields Memorial and to be laid out with a series of highways and markers on what is known as the Antietam open plan.

History records no greater display of valor, no nobler deeds of sacrifice, than those of Fredericksburg, Chancellorsville, the Wilderness, and Spotsylvania Courthouse. On the plain before the stone wall at the foot of Maryes Heights, brigades, divisions, and corps charged as bravely and as vainly as the Six Hundred at Balaklava. At Chancellorsville Stonewall Jackson's flank attack was as great a



THE LAMBERT POINT COAL PIERS AT NORFOLK

Three great coal-carrying railroads bring millions of tons of coal down to Hampton Roads. In a recent year 27,500,000 tons rolled down from the mountains and went into the bunkers and holds of ships that sail the seven seas. Of this more than 13,000,000 tons went to New England to turn its factory wheels, drive its locomotives, and keep its populace warm. The three dumps in the foreground are capable of unloading 120-ton cars with as much ease as a laborer dumps a wheelbarrow. Cars are lined up to await their turn, as shown in the illustration on page 455.

© Underwood & Underwood

AMID THE BARREN HILLS OF OLD VIRGINIA

Not all of the Old Dominion's terrain is made up of green fields. Beneath such barren hills in the southwest corner of the State sleep the black diamonds which, as Pocahontas coal, help to make the wheels of the world go round.

Photograph by Charles Martin

IN HONOR OF THE LEADERS OF THE LEWIS AND CLARK EXPEDITION

Meriwether Lewis and William Clark, the latter a brother of George Rogers Clark who saved the northern Mississippi Valley for the American cause (see page 445), journeyed across the Rockies to the mouth of the Columbia River, and thus planted the American flag on the Pacific. It is one of the coincidences of American history that two brothers should have been largely instrumental in carrying the American frontier nearly 2,000 miles westward, and their memories are commemorated in bronze and marble at Charlottesville.

thunderbolt as ever was launched in war. In the Wilderness the Confederate tiger leaped upon the Federal lion with a fury unsurpassed, and a forest fire added its terrors to those of battle.

MARKING THE PENINSULAR CAMPAIGN

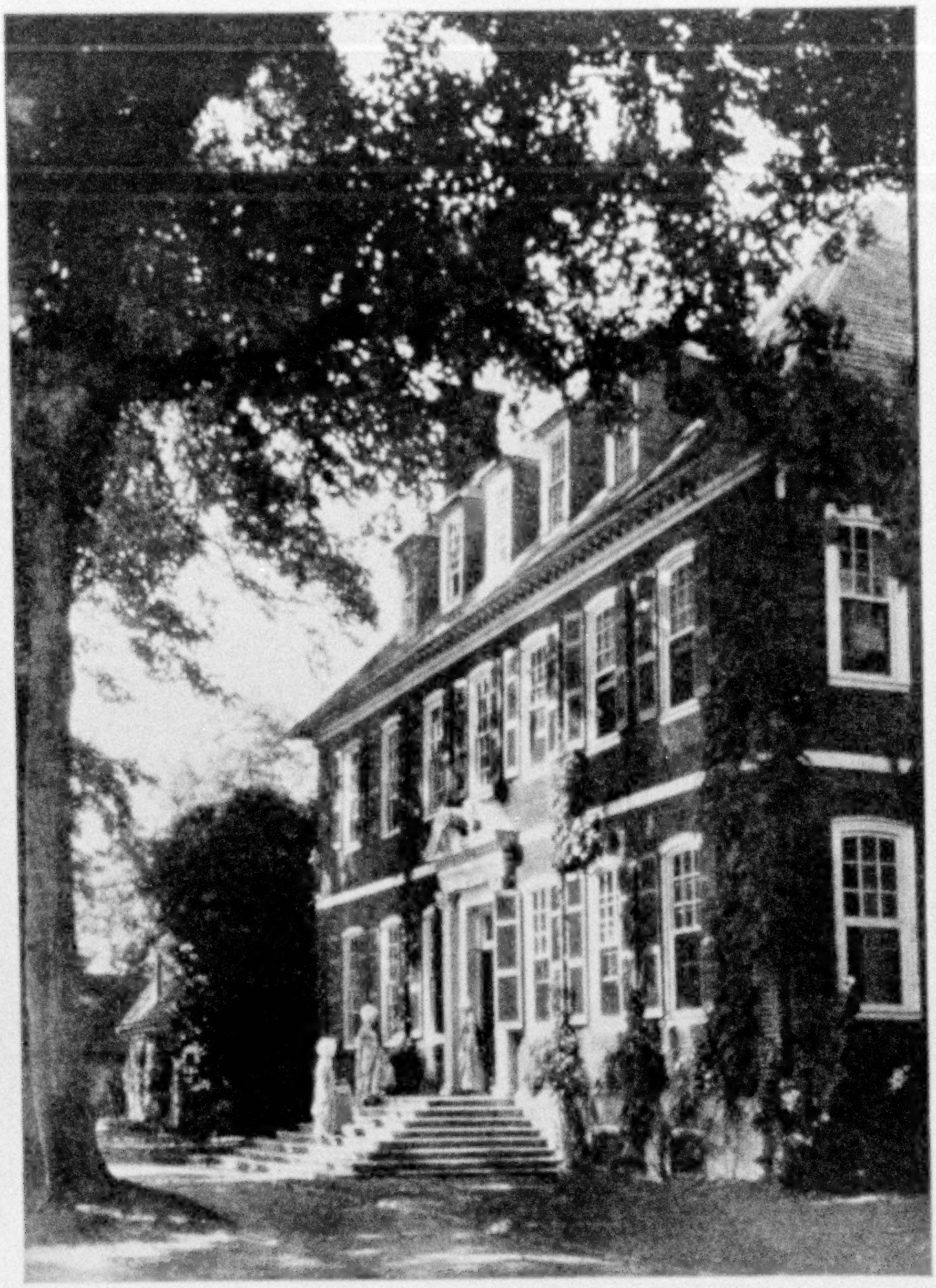
A Richmond association is engaged in marking the series of battlefields that figured in McClellan's Peninsular Campaign: Seven Pines, Fair Oaks, Savage Station, Mechanicsville, Beaver Dam, Gaines Mill, Cold Harbor, Fraziers Farm, and Malvern Hill. Bronze tablets, with descriptions as impartial as if they were written by a man from Mars, tell of the several battles and their principal events.

It is planned to build a modern highway that will make the circuit of the scenes of the great battles. To-day good roads lead out of Richmond to Seven Pines, Fair Oaks, Savage Station, Mechanicsville, Fraziers Farm, and Malvern Hill; but he who, except in dry weather, tries to follow McClellan's retreat by the roads that cross the sloughs of the Chickahominy and the morasses of White Oak Swamp is likely to get an all-too-graphic realization of the terrible experiences of the armies of Northern Virginia and the Potomac in that bitter campaign.

WRECK AND RUIN PERVADE APPOMATTOX

The United States Government has established a military park at Petersburg, and the development there will consist largely of a driveway connecting the forts built by the two armies in the eight months' siege that ended in the fall of the city. The Crater area is now in the keeping of a local association and the tunnel by which the Confederate fort was mined has been opened recently.

Appomattox, the scene of the surrender of the Army of Northern Virginia and



WESTOVER, A JEWEL OF THE JAMES

The second William Byrd, known as the Black Swan of Virginia, not only built this magnificent home on the James, but established the city of Richmond. A descendant of his is to-day Governor of Virginia and lives in the executive mansion, which stands in the corner of Capitol Square, on land once owned by the founder of the State capital city.

the fall of the Confederacy, is only a seven-hour motor journey from that other great surrender field of America—Yorktown. As it was at Appomattox that the unity of the States finally was achieved, and there that the finest example of magnanimity and chivalry in American history was wrought, it deserves to rank with Yorktown in the hearts of the American people.

The visitor who goes to Appomattox to-day can readily believe that the last sounds which awakened its echoes were those of the final artillery fire from the position of the Southern battery which stood in the yard of the now dilapidated Methodist parsonage.

For wreck and ruin pervade the very air. The old stage-road tavern still stands, but it has a pathetic appearance. The McLean House was torn down for removal to the Chicago World's Fair, but was not taken there. A small pile of rotting lumber and a large pile of old hand-cut laths are all that remain except the bricks, a few still intact one upon another.

The old jail, with its two-pound key, still remains, but it is deserted, the courthouse and county seat having been moved over to the little town that has grown up by the railroad station.

Even the signs that many years ago were put up to mark the various spots of interest show the general decadence that characterizes the spot. One of them, marking the position of one wing of Grant's army and showing where the arms of Lee's troops were stacked, was split many years ago by a bolt of lightning.

Deep gullies now mark what were the side drains of the old Richmond road, and in these repose many of the metal guides that once marked the positions on the field.

But Appomattox has its guides. In spite of its wretchedness and its poverty, it possesses a dozen or more children who spend their spare moments hunting for Minié balls, canister, and other relics of the field, which they sell to visitors at twenty-five cents each.

One gathers that they are graduated

Photograph by Charles Martin

THE GATEWAY AT WESTOVER, GUARDED BY EAGLES AND BEARING THE MONOGRAM OF WILLIAM BYRD

Legend has it that the second William Byrd's beautiful daughter Evelyn was engaged to the future Lord Peterborough, of England, but that her father brought her back to America and broke off the match. She never married, though many another suitor sought her hand. The romancers say that "she wept until she died" (see, also, illustration, page 459, and text, page 439).

into guides as soon as they learn to toddle, for the whole population of village towheads met me and each wanted the job of showing me around. The oldest of the group could not have been more than 14; yet, without exception, both boys and girls showed a remarkable familiarity with the story of Appomattox.

THE HIGH WATERMARK OF AMERICAN MAGNANIMITY

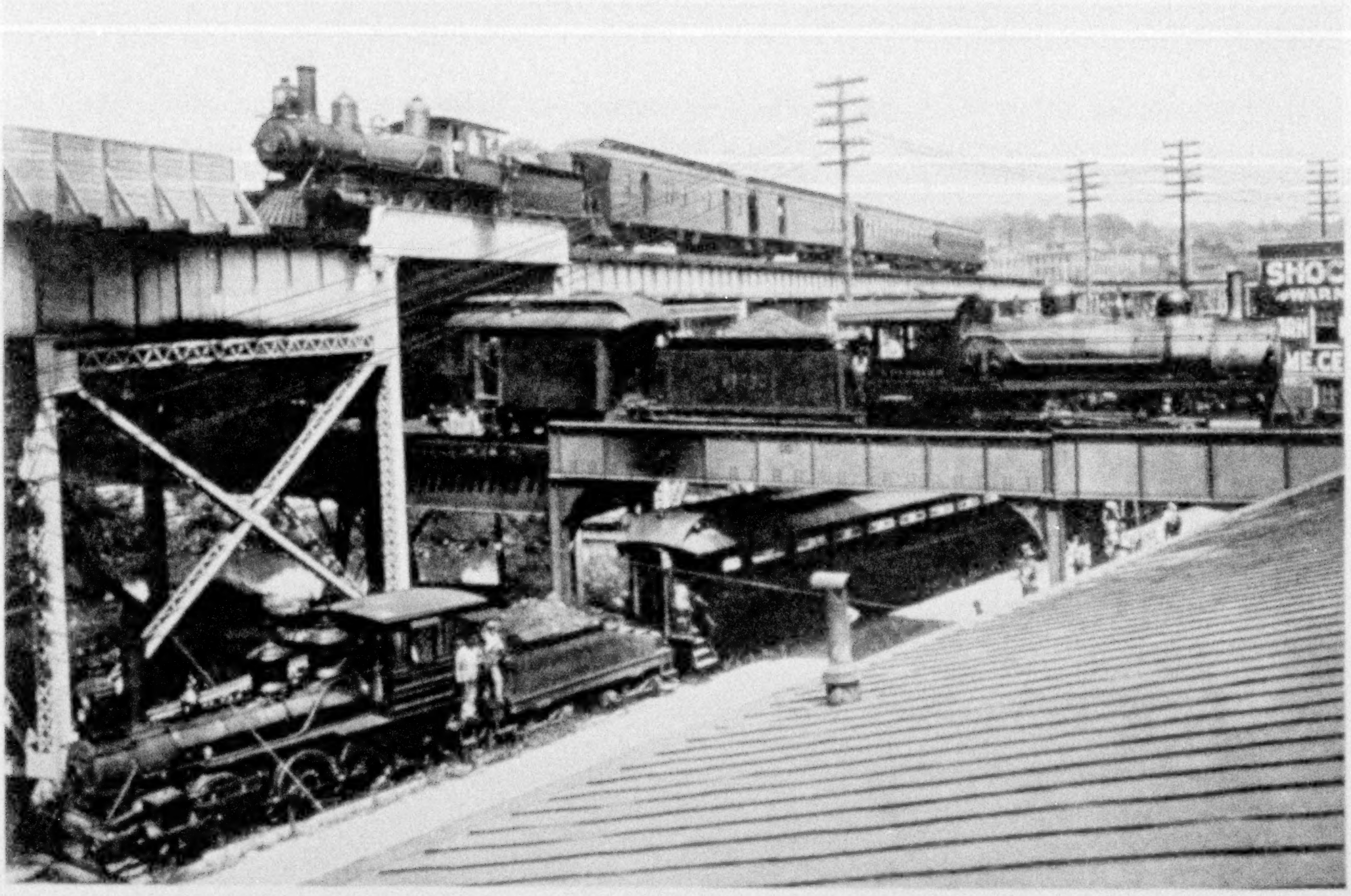
Col. Charles Marshall, a great-nephew of Chief Justice John Marshall, was General Lee's military secretary and was the only officer the great Confederate chieftain took with him in his negotiations for the surrender of his army.

His tributes to General Grant and his officers upon their conduct on that occasion reveal the fine chivalry of that momentous afternoon:

"Perhaps the most impressive feature of that occasion was the fact that there American soldiers met together, who dealt with each other as American soldiers. If the officers of General Grant's army had been instructed how to act; if they had learned their parts; if they had been taught by the greatest actors how to play them, how to act at a time when one of the loftiest souls that God ever sent upon earth was humbled, how to act so as to show their respect and veneration, they could not have done better than they did. They could not have done better, because they were and behaved as American soldiers."

At another point in his story Colonel Marshall says, in speaking of the conversations that ensued after the mutual letters of surrender were drafted:

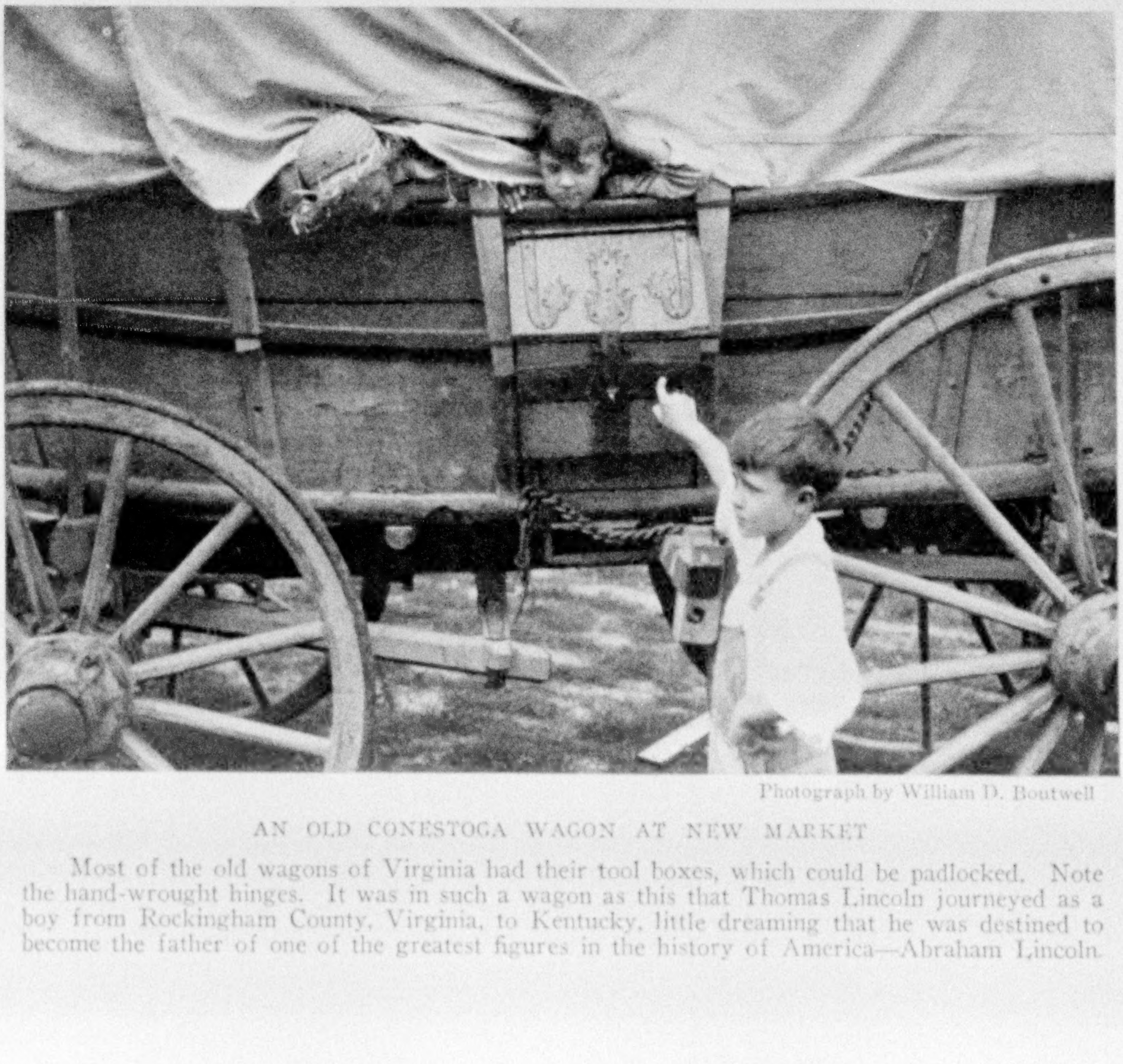
"I cannot describe it. I cannot give you any idea of the kindness, and generosity, and magnanimity of those men. When I



Photograph by Virginia Department of Agriculture

RAILROADS IN TIERS AT RICHMOND

The Chesapeake & Ohio, the Seaboard Air Line, and the Southern, from top to bottom respectively, avoid grade crossings in this fashion, one block south of the Main Street Station.



Photograph by William D. Boutwell

AN OLD CONESTOGA WAGON AT NEW MARKET

Most of the old wagons of Virginia had their tool boxes, which could be padlocked. Note the hand-wrought hinges. It was in such a wagon as this that Thomas Lincoln journeyed as a boy from Rockingham County, Virginia, to Kentucky, little dreaming that he was destined to become the father of one of the greatest figures in the history of America—Abraham Lincoln.

think of it, it brings tears into my eyes." We see the whole proceedings permeated by the magnanimity of General Grant and the honor in which General Lee and many of his officers were held. We see General Grant according to his great adversary the designation of the meeting place; we see him give General Lee the choice of meeting him in person or of designating officers to meet officers he would select; we see the exemption of the side arms, baggage, and horses of the officers; we hear his apology for appearing in fatigue uniform rather than keep General Lee waiting; we see him grant to each man who claimed a horse or a mule the privilege of riding it home to plow his field and cultivate his crop; we hear his order to Sheridan to give the Confederates 25,000 rations.

We see it in General Grant's call of courtesy on General Lee the next day; in the request of General Ingalls, Sheridan, and Williams to visit friends in the Confederate lines; in visits to their friends in the Union Army by General Wilcox, who had been groomsman at General Grant's wedding; by General Longstreet, who also had attended his wedding; by General Heth, who had been Grant's intimate companion in the old army.

A VALIANT ARMY DISBANDED

We see that spirit also in General Lee's assurance to General Grant that the latter's attitude would have a happy effect upon the South, and, above all, we recall General Grant's order, when he heard salutes being fired, that they should be stopped immediately, saying: "The war is over, the rebels are our countrymen again, and the best sign of rejoicing after the victory will be to abstain from all demonstrations in the field."

Nor was it an inglorious army that marched up the old clay hill and deposited its guns in the clearing. The men had marched by night and fought by day all the way from Petersburg. Parched corn comprised their rations for the most part; their feet in many cases were bare, their clothes generally were in tatters; but their bayonets were bright and their gun barrels clean.

It was a coincidence that the headquarters of General Beauregard at the first battle of Bull Run was the house of Maj. Wilmer McLean, and that it was in his house that Grant received the surrender of Lee. Major McLean had no taste for war around his hearthstone, and, after Bull Run, decided to go down into midland Virginia; but when Colonel Marshall was looking for a house in which to effect the surrender, whom should he meet but McLean, whose home was between the firing lines!

WHEN VIRGINIA CAME TO HER GETHSEMANE

The Federal Congress recently authorized a survey of the surrender field at Appomattox, with a report thereon for its guidance in providing for its appropriate marking. The War Department made such a survey and has recommended a simple type of marking the area.

To millions of Americans the battlefields of the Old Dominion, whether those major ones heretofore enumerated or those lesser ones, like McDowell, Port Republic, Cross Keys, Fishers Hill, and Cedar Creek, possess a peculiar interest; for it was their grandfathers and fathers, their uncles, and their cousins whose courage, whose sacrifice, whose suffering, and whose lifeblood itself have invested the soil of those fields with a sacredness that even time does not serve to dispel.

It was a Gethsemane of anguish that brought Virginia to the cross of suffering which those battlefields spelt for her. No State had done more to make the Union than she; no State had sacrificed so much for its establishment.

Patrick Henry had been the tongue of the Revolution, Thomas Jefferson its pen, and George Washington its sword—Henry phrasing the yearnings of humanity for freedom, Jefferson drafting its charter of liberty, and Washington, the greatest of them, carving with his sword democracy's niche in the destiny of the race.

James Madison, the father of the Constitution, had sprung from her soil; John Marshall, the expounder of that great instrument, had come down from Virginia's Piedmont to occupy the Chief Justiceship of the United States Supreme Court for nearly half of the entire period up to the Civil War; James Monroe had gone up from the Northern Neck to bring the world to understand that the Western

AN AIR VIEW OF HISTORIC JAMESTOWN ISLAND

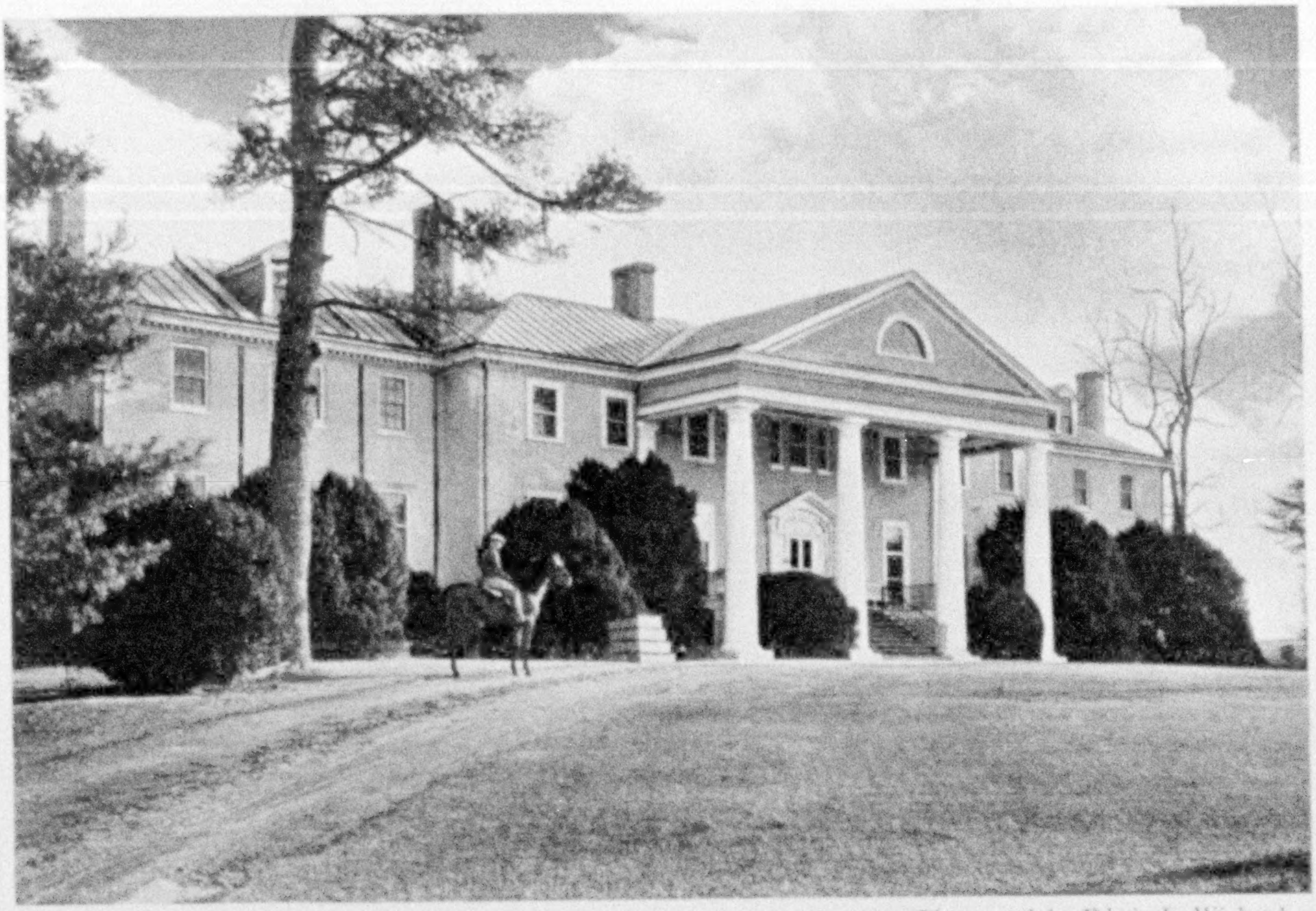
Here was established the first permanent English settlement in America. The triangle bounded by the hedge that passes the monument erected by Congress and turns back to the river at the right is the area protected by the Association for the Preservation of Virginia Antiquities. The old church stands at the edge of the little grove beyond the pier. The statues of Capt. John Smith and Pocahontas may be seen as white dots opposite the breakwaters.

Hemisphere was reserved for democracy. In the matter of extending the domain of the United States, Virginians had played as vital a part as in its formation and the charting of its course through the years.

George Rogers Clark, an officer of Virginia, commanding militia recruited in and paid by Virginia, had defended the State's charter rights to the territory between the Ohio and the Mississippi. Thomas Jefferson had been instrumental in acquiring the Louisiana Purchase territory, Meriwether Lewis and William Clark had carried the country's flag to the Pacific, and Zachary Taylor, Winfield Scott, and Sam Houston had led in planting it on the Rio Grande.

THE RICH HISTORY OF THE UNIVERSITY OF VIRGINIA

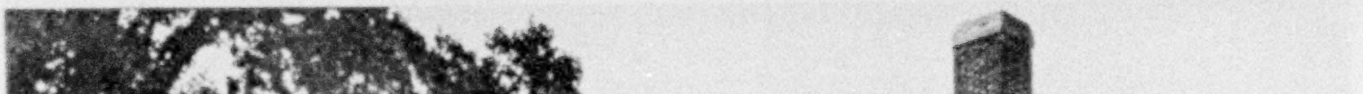
No State has a nobler galaxy of nationally known institutions of higher education. The University of Virginia, founded by Thomas Jefferson, who selected its faculty, arranged its curriculum, and designed its buildings, ranks with the greatest institutions of the world, alike in the quality of its traditions, the richness of its history, the perfection of its architecture, and the charm of its setting.



Photograph by Edwin L. Wisherd

MONTPELIER, NEAR ORANGE, THE HOME OF JAMES MADISON

The parents of the present owner of Montpelier added a story to both wings and enlarged them. They also built a wall around the family plot where the Father of the Constitution and his beautiful wife are entombed. To-day the Madison home is admirably maintained.



Photograph by Charles Martin

BERKELEY, THE BIRTHPLACE OF WILLIAM HENRY HARRISON

"Old Tippecanoe" was the ninth President of the United States and the grandfather of the twenty-third. He and his Vice President, Tyler, were from the same county—Charles City—and when Harrison died Tyler became President. Westover adjoins Berkeley.

Photograph by Jacob Gayer

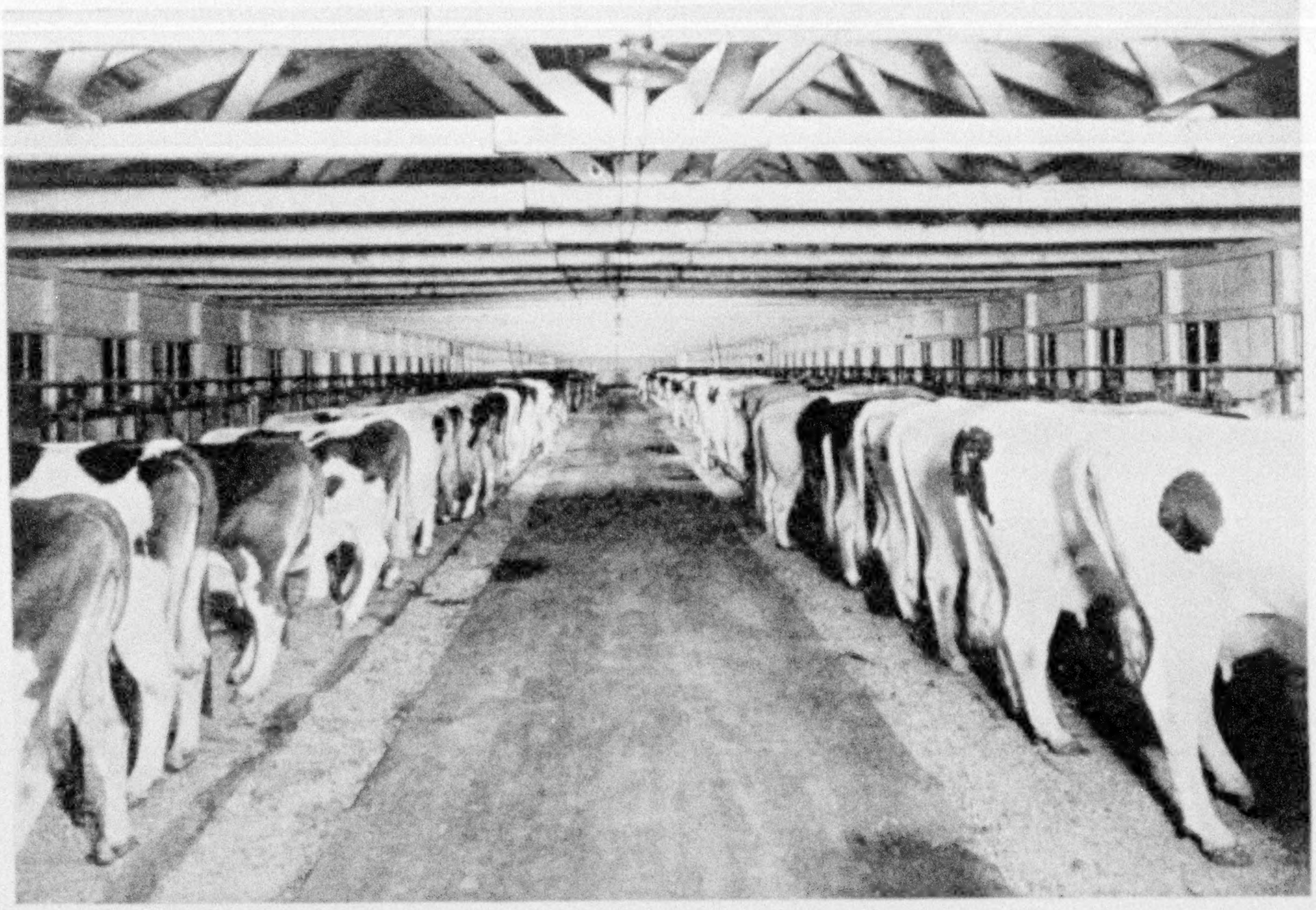
THE MAYPOLE DANCE AT THE DEDICATION OF KENMORE

The patriotic women of Fredericksburg had a hard battle to save Betty Washington's home, but their efforts have been crowned with success at last (see, also, text, page 448, and Color Plate V).

Photograph by Charles Martin

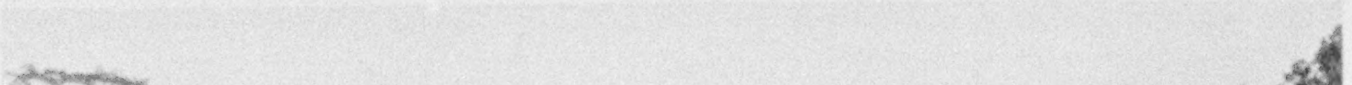
SHERWOOD FOREST, HOME OF PRESIDENT JOHN TYLER

After his retirement from the White House, the tenth President of the United States lived here and gave the estate its name. In his facetious moments he called himself the Robin Hood of Virginia.



A MODERN VIRGINIA DAIRY BARN

The improvement in live stock in three decades is one of the highlights in the story of the Old Dominion's progress (see, also, text, page 424).



REMAINS OF A CYPRESS FOREST IN LAKE DRUMMOND

In 1763 George Washington wrote that he had entered the Dismal Swamp, of which Lake Drummond is the heart, and had encompassed the whole. This is the scene of Thomas Moore's ballad of the girl whose wraith still paddles her white canoe guided by a firefly lamp. Many millions of board feet of cypress have been taken from this area.

Photograph by Benjamin A. Stewart

STRATFORD, THE HOME OF THE LEES, WESTMORELAND COUNTY

This house has been acquired recently by the Connecticut Daughters of the Confederacy, who expect to preserve it, like Mount Vernon and Monticello, as a national shrine (see page 447).

Photograph by Charles Martin

THE HOME OF THE FIRST PROFESSOR OF LAW IN AMERICA

The list of those who studied law under George Wythe, of Williamsburg, looks like a directory of early Virginia statesmen. The Wythe House is a part of the restoration program at Williamsburg, and is now the headquarters of that monumental undertaking, the cost of which may run even to ten millions of dollars (see text, page 472).

Photograph by Edwin L. Wisherd

THE ERICSSON STATUE AND THE ARLINGTON MEMORIAL BRIDGE

This monument to the inventor of the *Monitor*, "the cheese box on a raft," stands on the banks of the Potomac. The Crown Prince of Sweden took part in the dedication ceremonies during his visit to Washington two years ago. In the background is the finely conceived and splendidly planned structure which typifies the binding of the North and South in indissoluble union, with the kindliness of Lincoln, the magnanimity of Grant, and the chivalry of Lee as the common pride of both sections. The grandson of General Grant, Col. U. S. Grant 3d, is the executive officer of the commission in charge of its construction (see, also, page 470).

James Madison and James Monroe sat with Thomas Jefferson on its first Board of Visitors, while Edgar Allan Poe, Walter Reed, and Woodrow Wilson were students there.

THE DISTINGUISHED RECORD OF WILLIAM AND MARY COLLEGE

Down at Williamsburg stands historic old William and Mary. Perhaps no other school in the world has, in proportion to the size of its student body, graduated more men who have made history. From its classic walls have gone out three Presidents of the United States, fifteen Governors of the Old Dominion, three Justices and a Chief Justice of the United States Supreme Court, four signers of the Declaration of Independence, and the President and fifteen members of the Continental Congress. It was the first college in America to receive a charter from the Crown; the first and only college to receive a coat of arms from the College of Heralds; the first to have a full faculty, the elective and the honor systems. Here was organized the Phi Beta Kappa Society and the first school of law, political economy, and history.

Here Thomas Jefferson laid the educational foundations of his brilliant career; John Marshall gathered the legal lore that made him the first jurist of America and won for him the sobriquet of Expounder of the Constitution; and James Monroe prepared himself for his great career in diplomacy, eventuating in the universal acceptance of the Monroe Doctrine that saved the New World from the land hunger of the nations of the Old.

At Lexington we have Washington and Lee University, endowed by the Father of his Country and presided over by the hero of the South. By precept and example General Lee there taught a loyal acceptance of the verdict of Appomattox and inculcated in the hearts of his students that spirit of fraternity which was sealed in blood covenant in the war with Spain and the World War.

At Blacksburg is the Virginia Polytechnic Institute, where the leaders of the new agricultural era in Virginia have been and are being trained. From its halls go out most of the county agents who are laboring so effectively in the extension of scientific agriculture in the State.

The list of colleges, girls' schools, and coeducational institutions in Virginia is a long and fine one, and few States now are sending a larger proportion of their sons and daughters into the halls of higher education than the Old Dominion.

The most richly endowed institution in the State is Hampton Normal and Agricultural Institute, a school for Negroes and Indians, founded by the American Missionary Society and developed by Gen. Samuel C. Armstrong. While the white colleges have had a long, hard struggle for funds, money has come to this school from the North in a golden flood. Recent statistics show that its endowment to-day is greater than the combined endowments of all the white colleges of Virginia, other than those owned by the State.

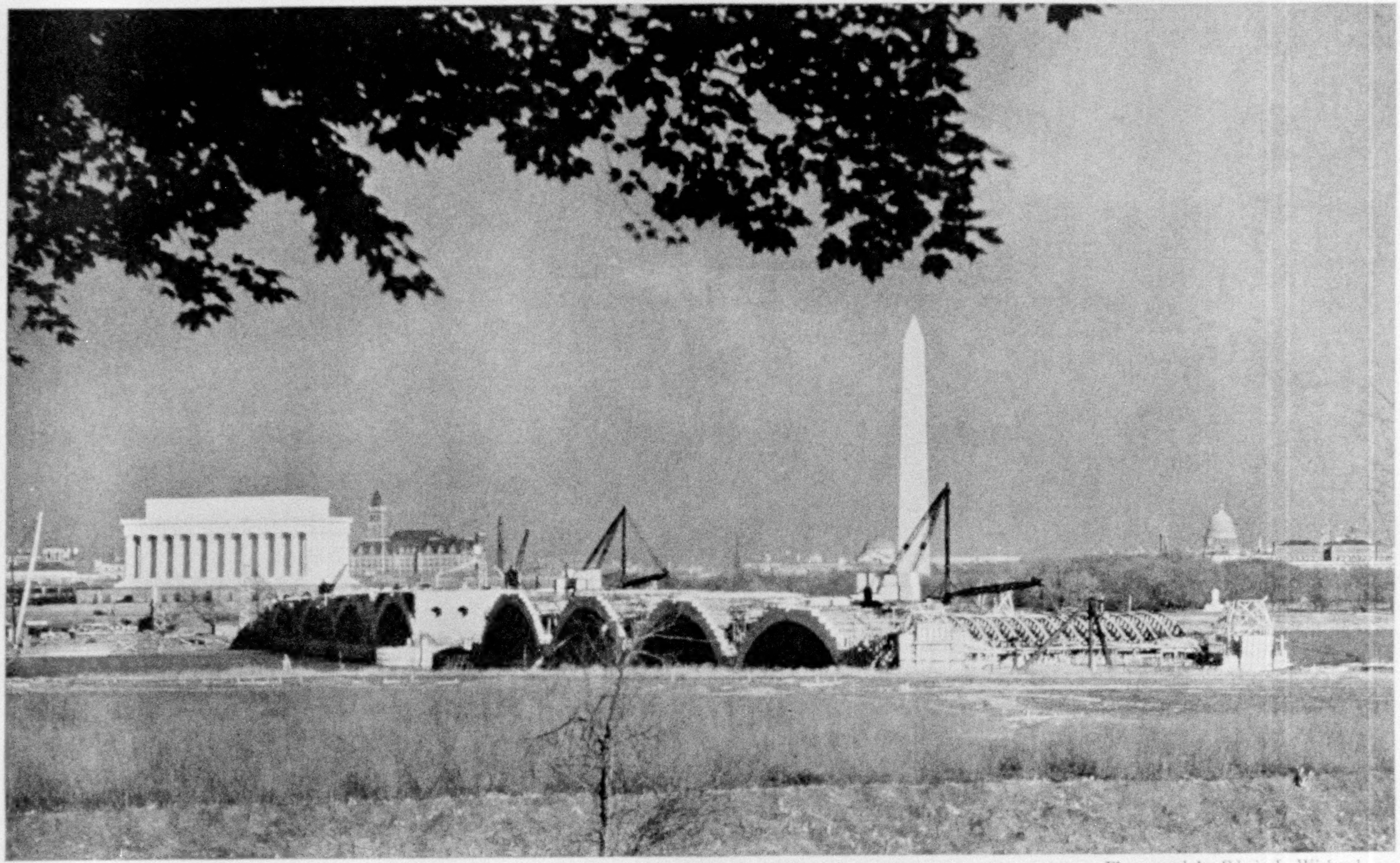
VIRGINIA'S NATURAL WONDERS

The natural wonders of Virginia, like her scenery and her shrines, are of many types. Her caverns are among the most noted in the world. Endless, Luray, Shenandoah, Grand, Massanutten, and Crystal, each presents a different type of underground formations.

The slow process by which the stalactites and stalagmites have been built up as each drop of water trickling down has brought its own tiny bit of solid matter and added it to those particles left by the drops that went before, excites the wonder of all who behold their beautiful limestone formations. In one of the caverns is a tiny stalactite which was broken off 40 years ago. Since then a deposit a fraction of an inch long and of knitting-needle thickness has been forming below the break.

The slowness of the building-up process which that little formation discloses bears eloquent witness to the vast ages that must have rolled by to account for the huge formations like the Hunter's Lodge, in the Shenandoah Caverns; the Oriental Palace and Solomon's Temple, in the Endless Caverns; the Saracen's Tent and Titania's Veil, in the Luray Caverns, and the Persian Palace, in the Grand Caverns.

Out in southwest Virginia is the Natural Tunnel, another of Nature's mighty creations. Through it passes a railroad and a river. Here the waters sought out the softest rock and grain by grain drilled through a mountain.



Photograph by Edwin L. Wisherd

THE ARLINGTON MEMORIAL BRIDGE UNDER CONSTRUCTION, AS SEEN FROM THE VIRGINIA SHORE

"The famous sons of this Commonwealth (Virginia) furnished the leadership for acquiring the territory which makes up the continental domain of the United States. Washington gave us the thirteen colonies, George Rogers Clark added the Northwest, Lewis and Clark carried our jurisdiction to the Pacific, Jefferson made the Louisiana Purchase, Monroe secured Florida, Sam Houston brought in the State of Texas, Winfield Scott and Zachary Taylor won the California region. Your soldiers led the forces in the field and your statesmen directed the negotiations at the council table in bringing together that vast area stretching from the Atlantic to the Pacific which comprises our Federal Union. Their wisdom endowed our country with an empire." President Coolidge in an address at Fredericksburg, Virginia, October 19, 1928.

Photograph by Edwin L. Wisherd

ICE SKATING ON THE REFLECTING BASIN OF THE LINCOLN MEMORIAL

Three generations of the Lincoln family lived in the Shenandoah Valley. Many of the relatives of the martyred President still live there.

In Augusta County stand the Natural Chimneys, a Nature-built bench mark by which we can measure the erosion processes that North River has carried on through the ages.

And yet, when we have appraised the time it took to establish all these natural wonders, and then stop to recall that these vast eras are but as a watch in the night when it is past compared to the ages that went before, when even the Blue Ridge and the Allegheny Mountains slept beneath the seas of Cambrian, Silurian, Devonian, and other epochs, we can gather a dim conception of the processes of earth sculpture that have shaped this mundane sphere into a fit abode for our puny selves.

THE RESTORATION OF WILLIAMSBURG

The recrudescence of Virginia is being marked by steps to save her shrines that are national rather than purely local. The splendid example of the patriotic women of America in the restoration and protection of Mount Vernon is being followed in many places. The Society for the Preservation of Virginia Antiquities has taken over Jamestown, with its few surviving relics of the place where Anglo-Saxon civilization in the New World had its birth and representative government its beginning.

But at Williamsburg is to be found the greatest and the most dramatic restoration in the history of America, which is made possible by the wonderful generosity of John D. Rockefeller, Jr., who has donated $10,000,000 to the project. Under the leadership of the rector of Bruton Parish Church, Dr. William A. R. Goodwin, a little city of the present is being transformed into a national museum of colonial history.

Under the plan that has been adopted, all that is postcolonial in the old town will be taken down and moved outside of the historic scene. Duke of Gloucester Street will lose its modern concrete paving. On the Palace Green will rise again the colonial capitol. The first theater in America will come back to grace the place.

Forty buildings stand in Williamsburg to-day that stood there when George Washington, Thomas Jefferson, James Madison, John Marshall, and Patrick Henry were college boys at William and Mary. No more will they have to keep company with modern structures. Instead, those that were unable to resist the tooth of time and the demands of progress will come back.

Processes have been discovered by which the brick of colonial times can be copied; fireproof shingles that perfectly simulate weathered old wood have been made. Streets and walks paved in colonial fashion will take the place of asphalt, concrete, and modern brick.

And then another Williamsburg, a modern one, will rise beside the restored one. The 20th century will live alongside the 18th, with its modern Main Street, its modern stores and homes.

Yorktown is not far away, and the battlefield where American liberty finally was translated from a dream to a reality will share with Williamsburg the restoring touch of a philanthropist's hand.

VIRGINIANS ARE MAKING HISTORY TO-DAY

Nor may we forget that to-day Virginia and Virginians are making history, just as they did in the 17th, 18th, and 19th centuries.

A Virginian was co-author of the Federal Reserve Act which has made America a model in financial stability; a Virginian in the House of Representatives and a Virginian in the Senate offered and sponsored the resolution declaring war with the Central Powers, and a Virginian in the White House signed and made it law, and thereafter brought the Nation safely and triumphantly through the greatest of all our foreign wars.

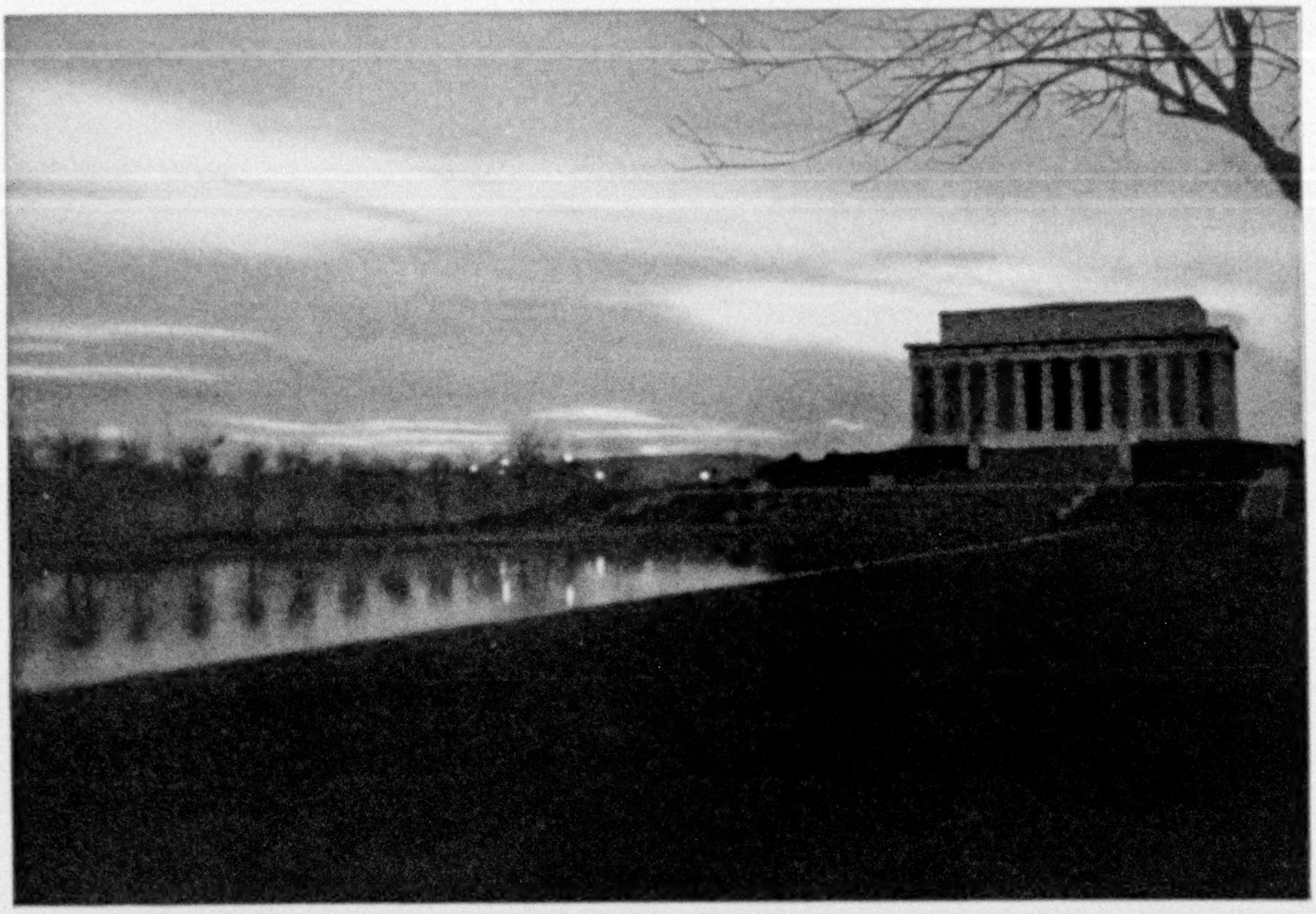
One intrepid scion of Westover is today attacking the problems of the Antarctic Continent as his earliest American ancestor attacked those of the cisatlantic wilderness, while another son of the same house has wrought remarkably in bringing the State of his fathers again into the forefront of American Commonwealths.

Through such as these we know that the spirit of bygone Virginia dwells to-day in the hearts of her sons and daughters who face the second quarter of the 20th century.

© National Geographic Society Natural Color Photograph by Charles Martin

PENNSYLVANIA'S TRIBUTE TO THE VICTOR OF GETTYSBURG

In the Botanic Gardens at Washington a grateful Commonwealth has erected this memorial to its illustrious son, George Gordon Meade. The group is the composition of Charles Grafly and depicts Loyalty and Chivalry drawing the cloak of war from the General's shoulder.



THE LINCOLN MEMORIAL AT TWILIGHT

"Here is a shrine at which all can worship. Here an altar upon which the supreme sacrifice was made in the cause of Liberty. Here a sacred religious refuge in which those who love country and love God can find inspiration and repose."—*Chief Justice Taft.*

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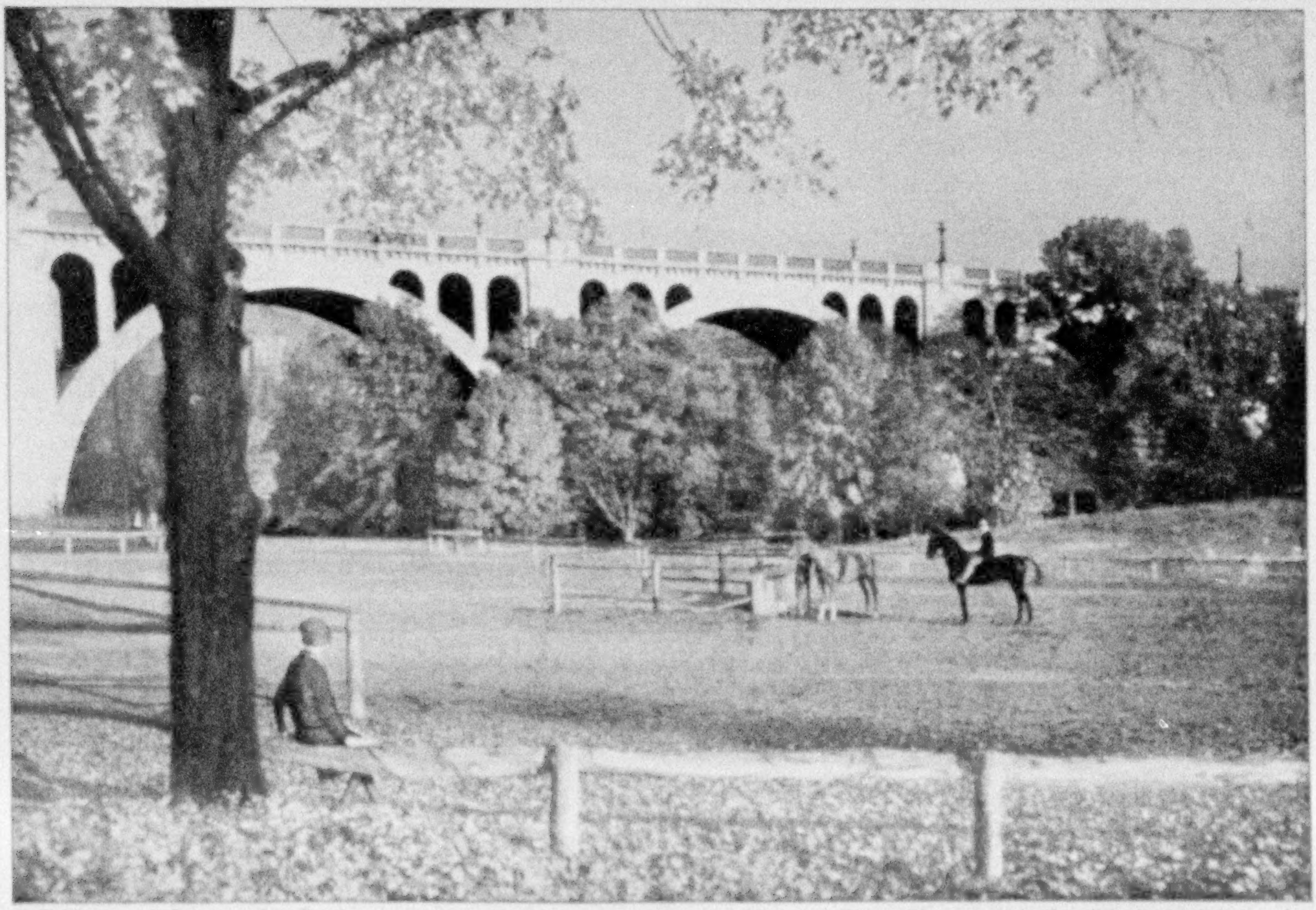
IN THIS TEMPLE THE MEMORY OF LINCOLN IS ENSHRINED

This stately marble structure stands near the western end of Potomac Park. Its 36 Doric columns represent the States constituting the Union at the time of Lincoln's death. Inside the building is a heroic statue of the great president by Daniel Chester French.

GEORGE WASHINGTON UNIVERSITY STUDENTS AT HOCKEY PRACTICE

The fine recreational areas in the District of Columbia and vicinity, its splendid libraries, its art galleries, and its museums are invaluable assets to the National Capital's numerous institutions of learning.



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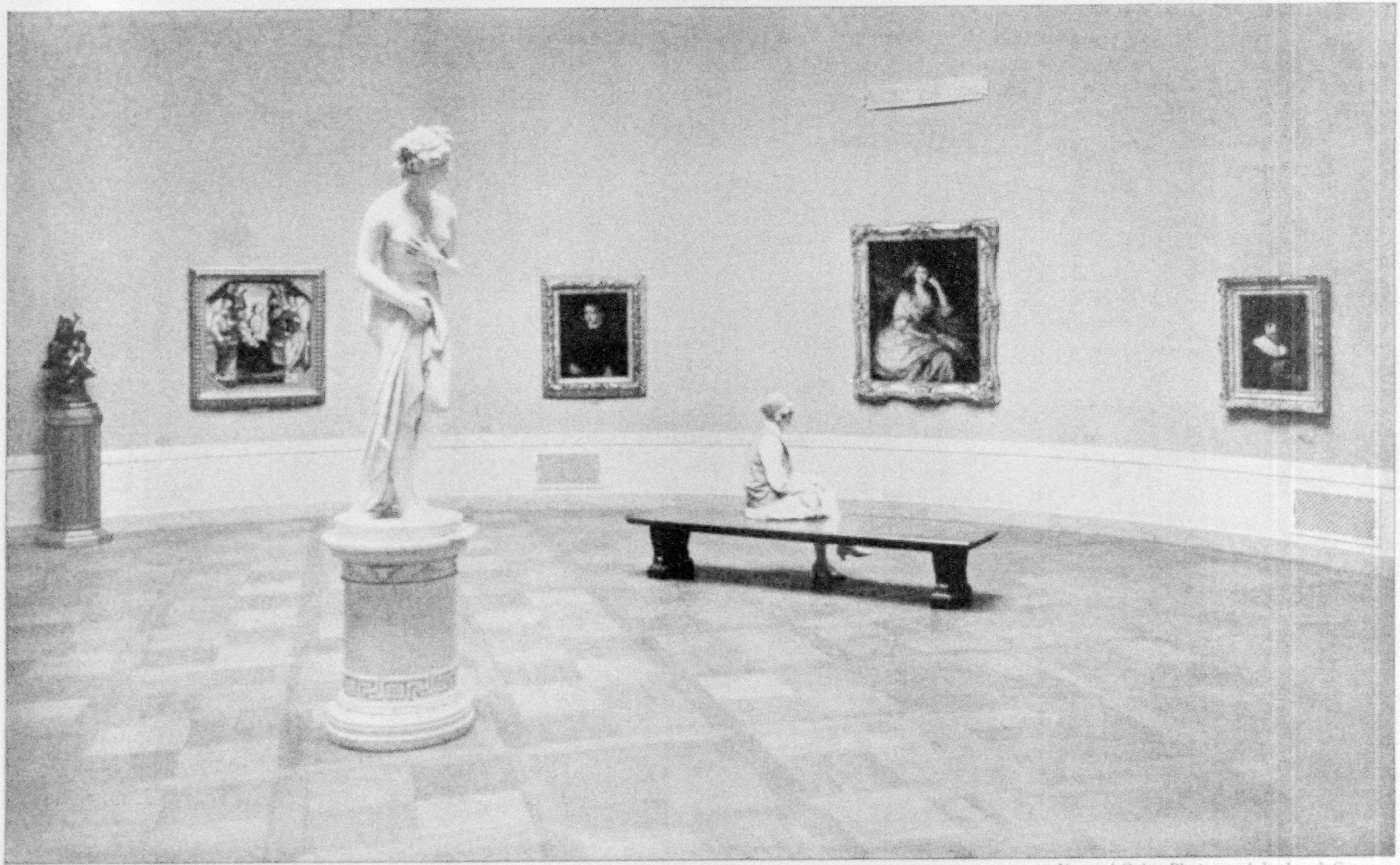
HORSEBACK RIDERS FIND A PARADISE IN ROCK CREEK PARK

Riding is a popular sport in the Nation's Capital. A network of bridle paths runs through the larger parks and distinguished men and women from all over the world may be seen cantering away their cares. Connecticut Avenue Bridge spans Rock Creek's beautiful valley.



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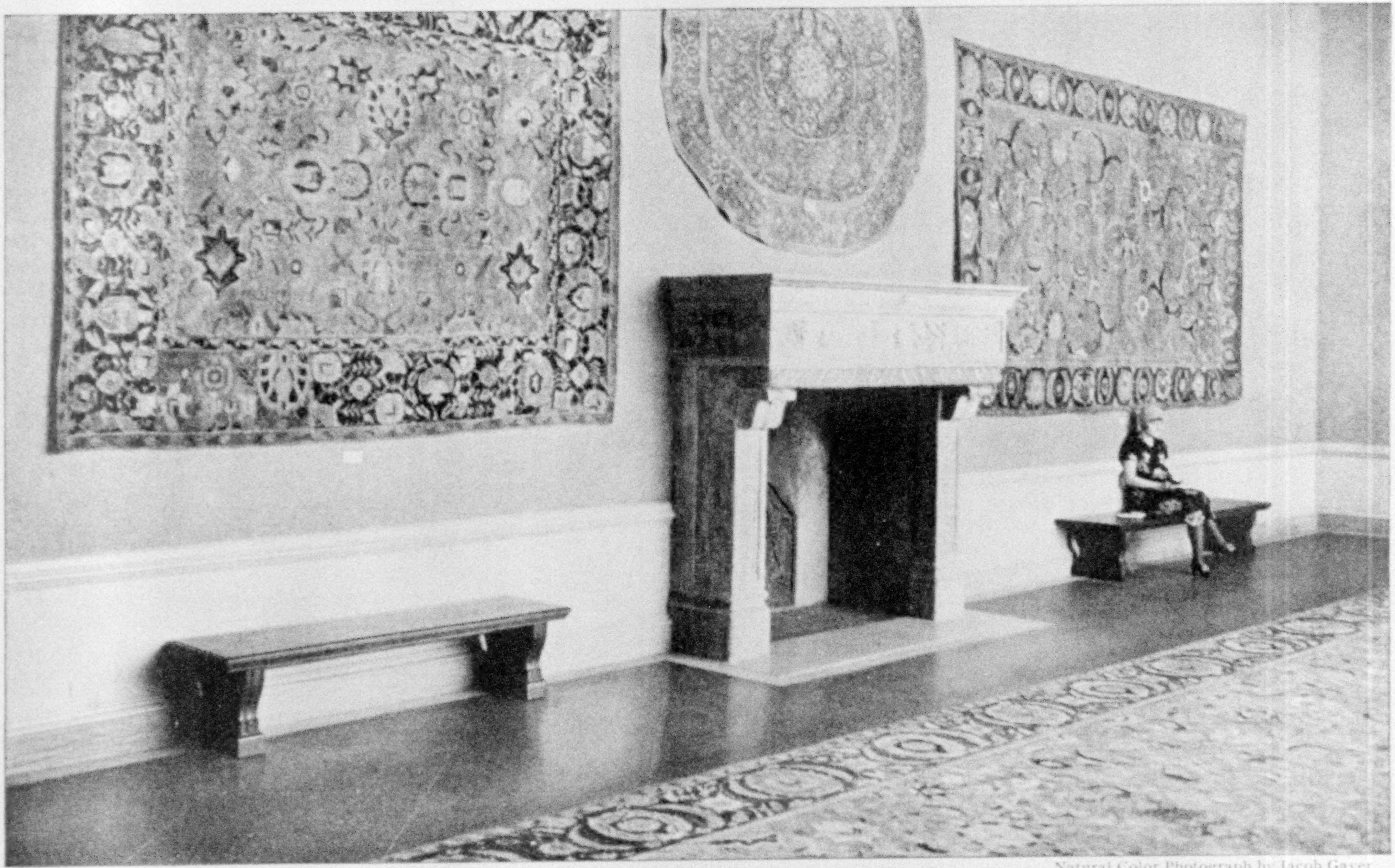
WASHINGTON IS GRADUALLY BECOMING A NATIONAL ART CENTER

In addition to the Corcoran Gallery of Art, recently enriched by the W. A. Clark Collection, and the Freer Gallery with its fine examples of oriental art, a national collection is constantly growing. Some of the jewels of the Clark Collection include (left to right) a "Madonna" by Perugino, Titian's "Portrait in Black," "Lady Dunstanville" by Gainsborough, and Rembrandt's "Man with a Scroll." The statue of Aphrodite is by Canova and the bronze group of the bound Prometheus is by Charles Renaud.



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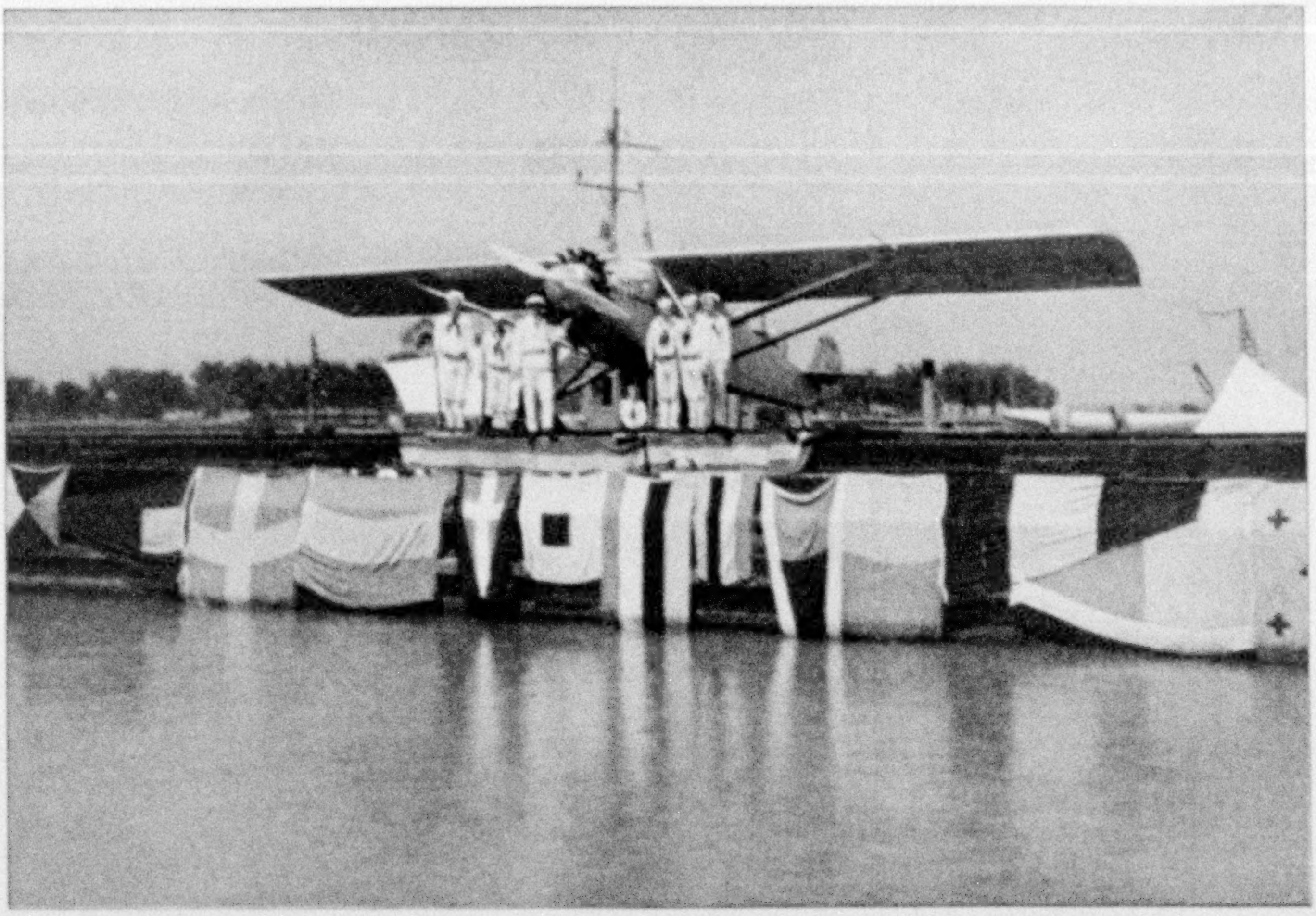
Natural Color Photograph by Jacob Gayer

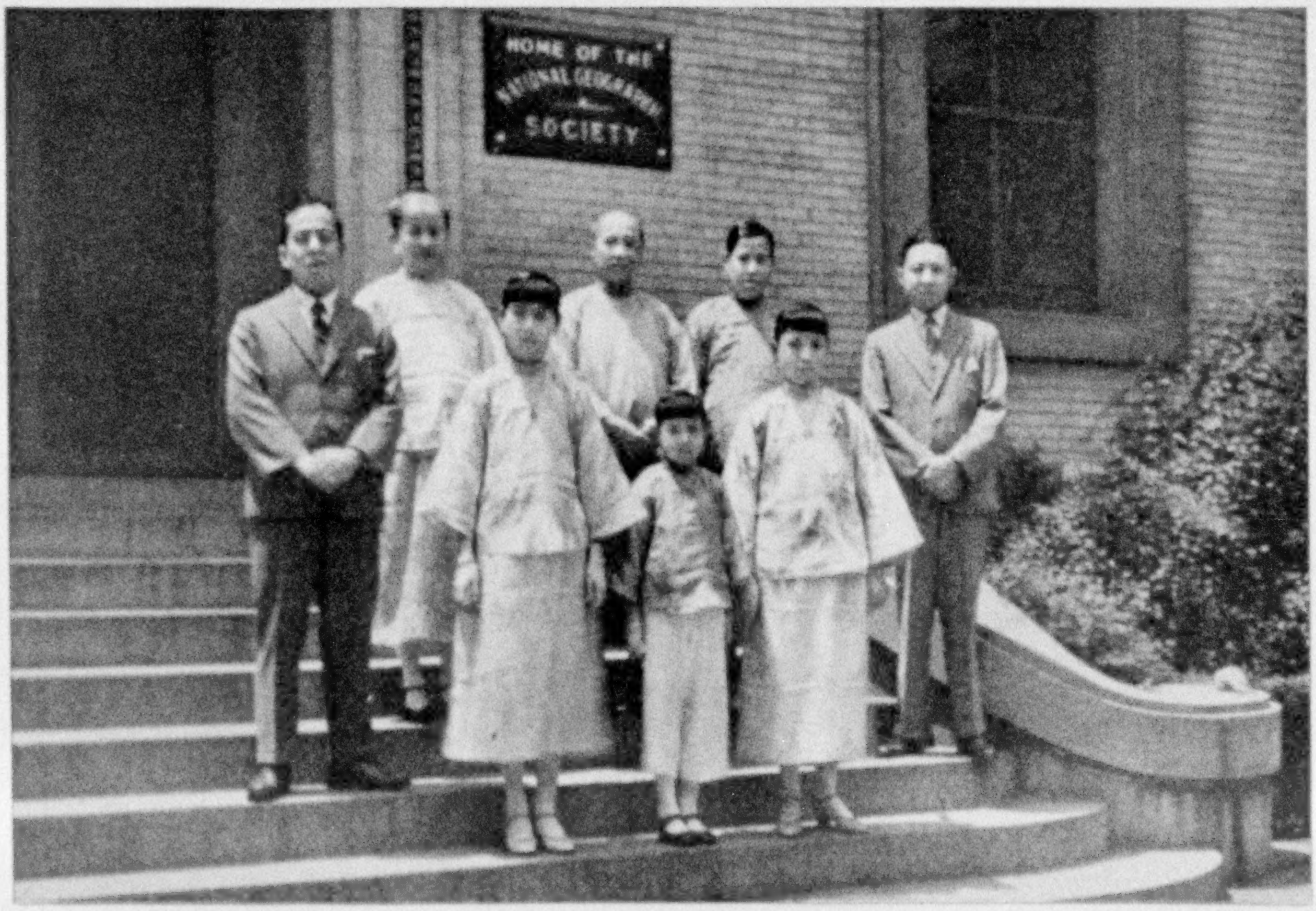
MANY FINE EXAMPLES OF THE WEAVER'S ART ARE INCLUDED IN THE CLARK COLLECTION

The pieces on the walls at either side of the 16th century stone fireplace are Ispahans of the same period. Above the mantel hangs a circular Damascus Halifat. The value of the tapestries and rugs of this fine collection, which includes four rare and beautiful Gothic tapestries made in Arras in the 15th century, four Gobelins and three Beauvais, has been placed at $3,000,000 (see also Color Plate XII).



HALF OF THE FAMOUS PARTNERSHIP OF "WE"

When Col. Charles A. Lindbergh brought the "Spirit of St. Louis" back from Europe, it was placed aboard a barge and anchored in the Potomac between Hains Point and the Army War College. While official Washington fêted the gallant pilot, thousands of people thronged Potomac Park for a sight of his famous plane.



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MEMBERS FROM THE ANTIPODES PAY A VISIT TO THE HOME OF THE NATIONAL GEOGRAPHIC SOCIETY

Every nation of the world is represented on the membership rolls of this scientific organization. These visitors are members from Malacca, Straits Settlements.

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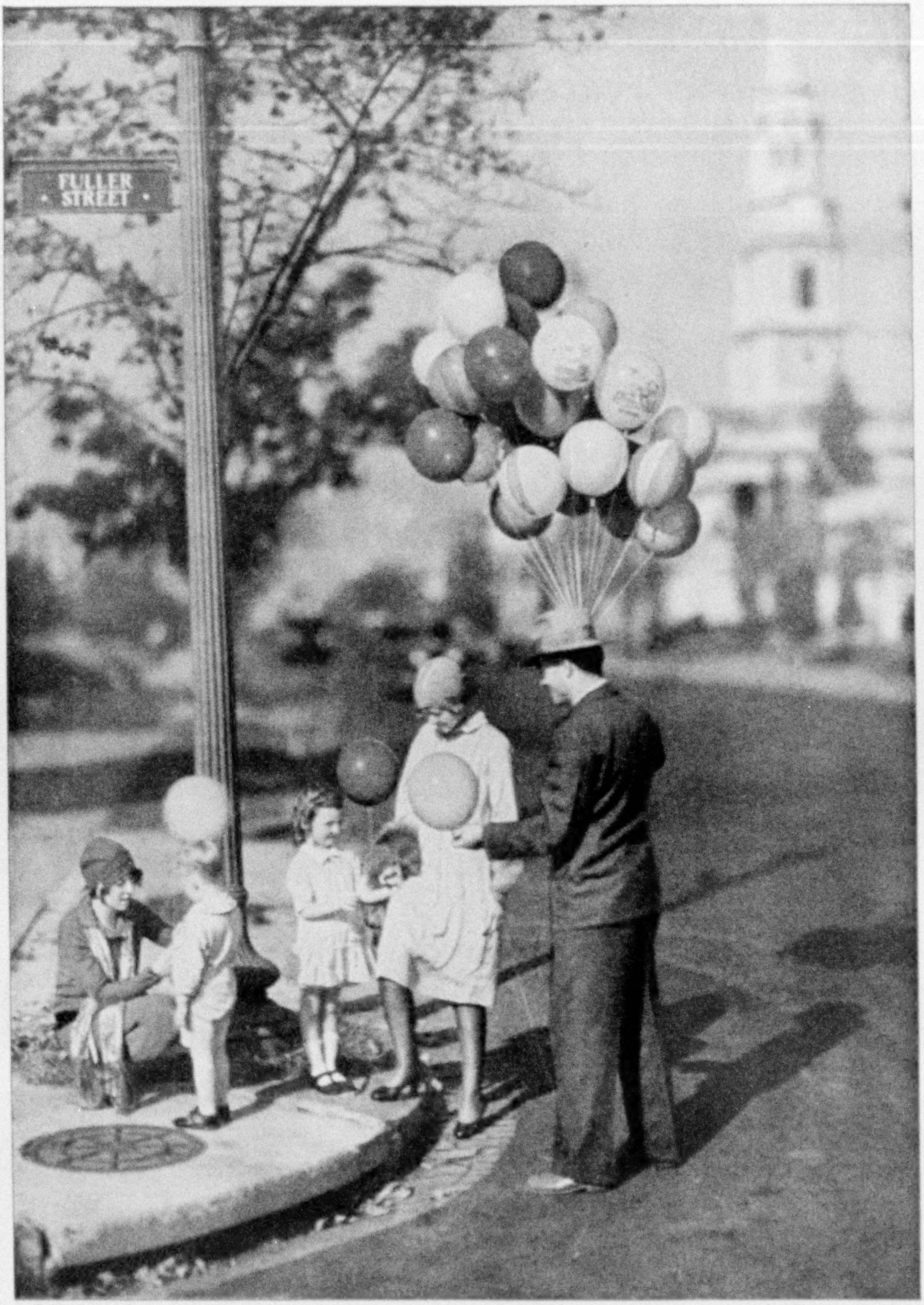
A REPLICA OF THE FAMOUS GROTTO OF LOURDES IN WASHINGTON'S FRANCISCAN MONASTERY GARDENS

When asked by his superior what he most desired in recognition of his splendid work at Cairo, Egypt, Brother Schilling, who conceived the idea of Old World shrines for this monastery, replied, "Let me go back to America to finish my work there." His wish was granted, and on Mount St. Sepulcher many sacred places are being reproduced.



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THE CHILDREN OF "EMBASSY ROW" PATRONIZE THE BALLOON MAN

Nowhere else in America does one find as many distinguished representatives of so many countries as in the National Capital. Within three blocks of this corner there are nine embassies and legations.

JEFFERSON'S LITTLE MOUNTAIN

Romance Enfolds Monticello, the Restored Home of the Author of the Declaration of Independence

By Paul Wilstach

Author of "Jefferson and Monticello," "Potomac Landings," and "Mount Vernon," and of "Holidays Among the Hill Towns of Umbria and Tuscany," in the National Geographic Magazine

"ALL my wishes end where I hope my days will end, at Monticello," wrote Thomas Jefferson to a friend. This great practical politician was at heart a bit of a sentimentalist. He had two great romances in his life: One was his one and only wife, the beautiful young Martha Wayles Skelton; the other was his "Little Mountain," the estate and the noble house he called Monticello.

Driving across Tidewater Virginia to the foothills of the Blue Ridge Mountains, and approaching the little city of Charlottesville, the traveler's attention is at once arrested by two related historic points. At the right a gatepost sign signals the entrance to Shadwell, where Jefferson was born in 1743; and, standing just here at Shadwell's gate, looking across a sweeping gap, through which the Rivanna races down from the mountains to join the James, one picks out an angle of a high white portico in the green forests on the nearer summit of a mountain group. It was there that the great author of the Declaration of Independence had the fulfillment of the best "wishes" of his long life, and his days did "end" there, for it is Monticello.

The Little Mountain crept into the consciousness of young Jefferson when he was a mere lad at Shadwell. It belonged to his father.

HIS BY THE CONQUEST OF YOUTHFUL IMAGINATION

While the Little Mountain was still his father's, and so only "ours" and not yet "mine," he nevertheless made it his own by the imaginative conquest of boyhood's playtime and dreams. During the lad's impressionistic years it held for him the chief mysteries of life. He found it peopled with the elves and ogres which inhabit every child's own world. Actually it was alive with the wild life which engages every normal boy's curiosity. It was his constant playground, the gymnasium of his knitting muscles, and at its crest the far-flung panorama of a beauty which was to him unequaled and unimagined anywhere else in the world gave him his boyhood's greatest thrill.

He was 14 years old when his father's death brought him a step nearer to the ownership and possession of his Little Mountain. During the next seven years in college and studying law at Williamsburg, the maturity of any dreams waited upon his coming of age, in 1764.

Thereafter his notebook began to bristle with the preparations going forward on his mountain top. A cellar was begun in the winter of 1767-8. A well was dug, and he wrote that "they dug and drew out 8 cubical yds. in a day." On Christmas Eve "the sawyers left off work," and they had "sawed 2,500 pales, 220 rails, 650 f. of inch chestnut plank & 250 of 2¼-inch do." So were cut and left to season the planks which were to go into his house.

THE SMALL HOUSE BECOMES HONEYMOON COTTAGE

The following July the brick-making had begun, and by that time he had enjoyed the thrill of seeing "Mr. Moore and his men" begin the leveling of the summit of the plateau of 120,000 square feet, measuring 600 by 200 feet, on which the first building rose within a twelvemonth.

That building was a small, one-story brick house, which we see there to-day, southeast of the great mansion, which, however, was not completed until some 30 years later. Shadwell burned down in 1770—young Jefferson was 27—and he thereupon moved up to the new little house on his mountain, and here kept bachelor's hall when not absent "practicing on the circuit," or "sitting" in the House of Burgesses, or looking for a mate and mistress for his home.

Photograph by Edwin L. Wisherd

JEFFERSON INVENTED NUMEROUS INGENIOUS CONTRIVANCES

This portable reading and writing desk is a replica of one which the sage designed and on which he wrote the Declaration of Independence. The board upon which it rests was built between the windows of his study, so that he might stand at his work and also get the benefit of the light. Above the desk hangs an original grant of land to Thomas Jefferson from Governor Francis Fauquier.

The servants had no thought that the newlyweds could make their way through the storm, and so they had all gone to bed. But the young couple needed no welcome to stimulate their happiness. There are questionable traditions of how on arrival they diverted themselves with fiddle, books, a bottle of wine, and by cooking their supper. The biographer, James Parton, however, gives an enthusiastic account, probably nearer the truth:

"They burst into the house and flooded it with the warmth and light of their own unquenchable good humor! Who could wish a better place for a honeymoon than a snug brick cottage, lifted five hundred and eighty feet above the world . . . and three feet of snow blocking out all intruders?"

WRITES THE DECLARATION OF INDEPENDENCE ON DESK HE INVENTED

During the next decade Jefferson was often absent from his home. First he made long trips to Philadelphia, where he sat in the sessions of the Second Continental Congress and wrote the Declaration of Independence on the ingenious portable writing desk of his own invention, a replica of which we see at Monticello, the original now being preserved in the National Museum at Washington. Later he was detained for considerable periods in Richmond as Governor of the State.

At the end of a decade of married life, Mrs. Jefferson died. She had borne him five children, of whom two daughters only

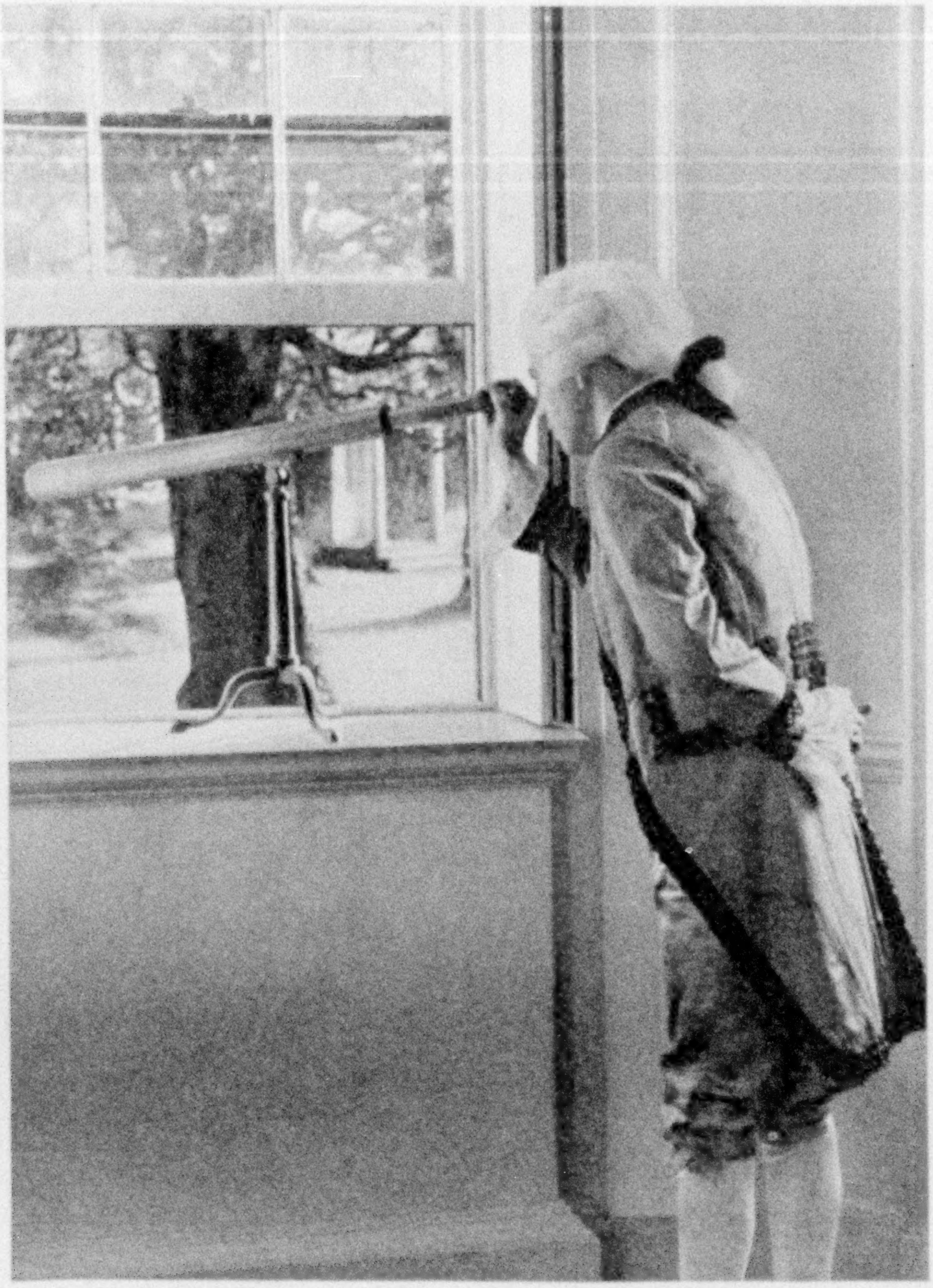
Two years later it became his Honeymoon Cottage. On January 1, 1772, he and Martha Wayles Skelton were married "down in tidewater." Immediately they began their long drive to their mountain home. Eight miles from it, at old Blenheim, they ran into a blizzard. The wheeled chaise could not be dragged farther through the snow. Nothing daunted, the romantic young people left it behind, mounted their horses, rode on, and arrived at Monticello in the middle of the midwinter night.

reached maturity. Meantime work on the big house had gone forward, but it did not then look at all as it did when finished. Yet, fortunately, there is a good description of it as it was then, for in that year, 1782, the French general, Marquis de Chastellux, in the course of a tour of America, visited Monticello, and this is his account of what he saw:

"The house, of which Mr. Jefferson was the architect, and often one of the workmen, is rather elegant, and in the Italian taste, though not without fault; it consists of one rather large pavilion, the entrance of which is by two porticoes, ornamented by pillars.

"The ground floor consists of a very large, lofty saloon, which is to be decorated entirely in the antique style; above it is a library of the same form; two small wings, with only a ground floor and attic story, are joined to this pavilion, and communicate with the kitchen, offices, etc., which form a kind of basement story, over which runs a terrace.

"My object in this short description is only to show the difference between this and the other houses of the country; for we may safely aver that Mr. Jefferson is the first American who has consulted the fine arts to know how he should shelter himself from the weather."



Photograph by Edwin L. Wisherd

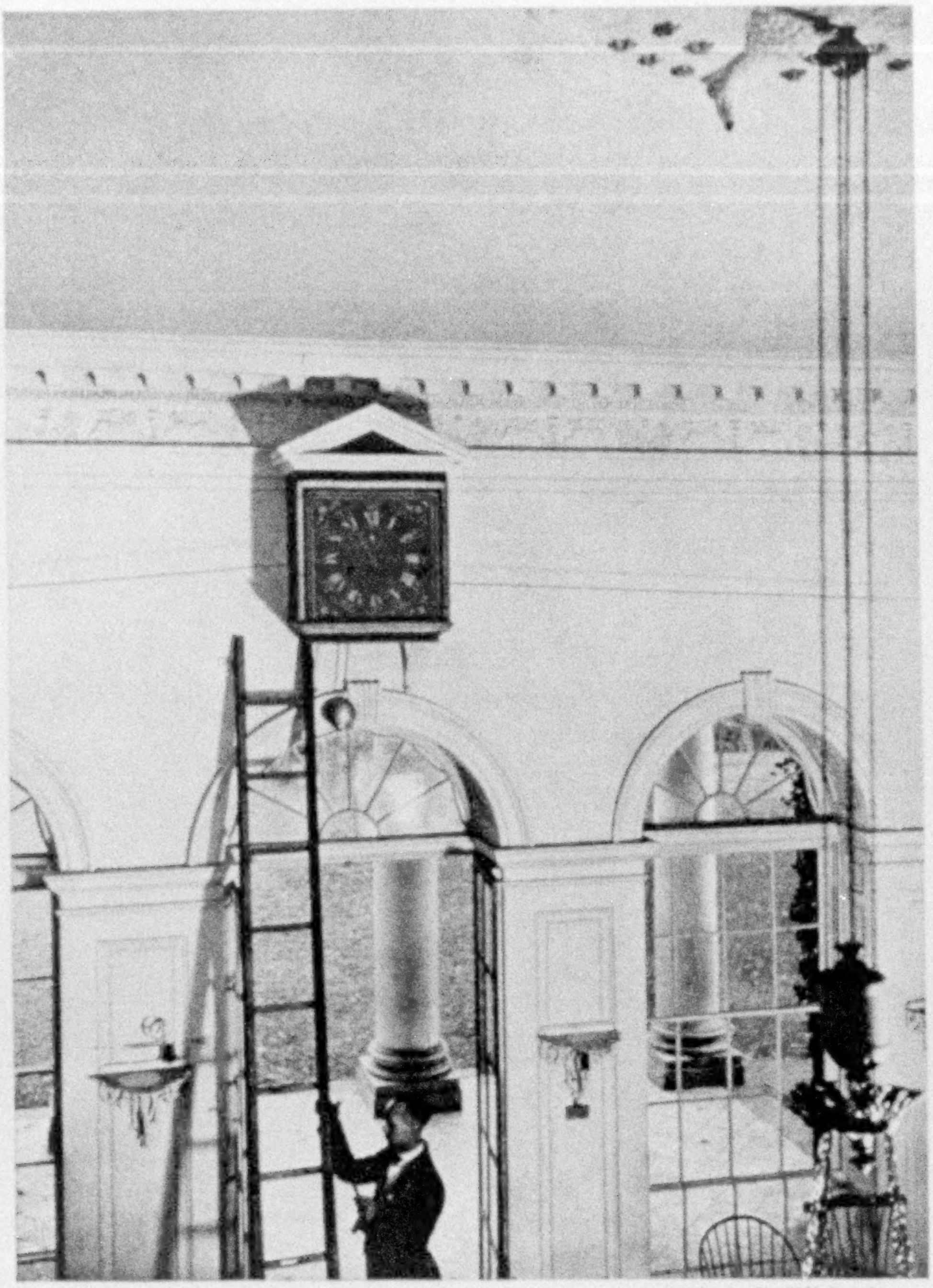
THE FOUNDER OF VIRGINIA'S STATE UNIVERSITY WATCHED ITS CONSTRUCTION FROM AFAR

At times, when he was unable to ride down to supervise the building operations, Jefferson used a telescope to watch their progress from a window of Monticello. The original instrument, now preserved at the University, was loaned especially for the making of this photograph for the National Geographic Magazine.

OWNER BORROWS FROM THE FRENCH SOME IDEAS FOR A HOME

Jefferson's longest absence from Monticello was during the five years when he was abroad as the young Republic's Minister to France. But even after that he was at home on little more than vacations, during the succeeding years, when he was Secretary of State, Vice-President, and for two terms President of the United States.

The ideas which modified the original plans for the house he seemed to have got by his observation of French houses. It was his expanding career which led him to double the depth of his house. He fell in love with the dome on the Hôtel de



Photograph by Edwin L. Wisherd

CLOCK, LADDER, AND LAMP DATE FROM JEFFERSON'S TIME

The timepiece was made especially for the master of Monticello by a Swiss clockmaker in his employ (see Color Plate XVIII). The ladder he designed and had made under his personal direction (see text, page 487). The hanging lamp, also an original furnishing, is suspended from a ceiling decoration of Jeffersonian conception.

Salm, in Paris, and it inspired him to add a dome to Monticello; but for it he eventually adopted the Temple of Vesta, out of the plates of his beloved Palladio (see, also, text, page 485).

The mansion as we see it to-day was completed during his first term as President, and when he finally left public life, in 1809, he came to spend the rest of his life in the house now so familiar.

Remembering these things as we drive on past Shadwell, always under and in sight of Monticello, any speed seems unequal to our eagerness to climb to the historic eyrie on the crest.

The way leads across the river at the edge of Charlottesville, over a delightful road, which at once rises in stiff grades around curves that seem to serpentine the mountain as it climbs. The horizons of the lovely panorama fall farther and farther away as we mount, when suddenly the car plunges into a dark forest of woody giants, everyone of which looks as if it had been a friend—an old friend, doubtless a boyhood friend—of Jefferson.

Suddenly, in an opening among the trees, as if at the bottom of a well of golden sunlight, the great gates and gatehouse appear and mark the limit of the modern estate. Jefferson's land holding on and about his Little Mountain contained 5,200 acres. To-day the land attached to the historic house on the mountain top, belonging to and cared for by the Thomas Jefferson Memorial Foundation, amounts to 683 acres. Inside the gates there is an even stiffer climb, up the last half mile, before the forest gives way to a clearing in which is revealed Monticello mansion in all its familiar and beautiful aspects.

Really to appreciate how imaginative Jefferson was in conceiving his house, and yet how ingeniously practical, one should at once, before entering, make the circuit of the whole domestic unit. It is not, as it appears, merely a dwelling house. It is a group of housings for servants and workmen—for shops, offices, and other necessities—yet so adroitly disposed that

one is not at any one time conscious of more than the central mansion and the two detached houses, connected by the low terraces.

HIS HOUSE PLAN COPIED IN THE UNIVERSITY OF VIRGINIA

Actually the splendid dwelling is in the center of one side of an open rectangle, the balance of which side, together with the two sides projecting at right angles to it, is submerged below the level of the lawn. These lateral extensions rise at their extremities in the two small brick houses, the one on the north being known as Mr. Jefferson's Law Office, and the other, facing it, as Honeymoon Cottage. The connecting terraces are in fact the flat roofs of the extensive domestic quarters, wholly open to light and air on their outer side.

This curious ground plan, which Jefferson used also in planning the University of Virginia, he borrowed from the great Italian architect, Andrea Palladio, to whom he was indebted for the first plan of his mansion.

Photograph by Edwin L. Wisherd

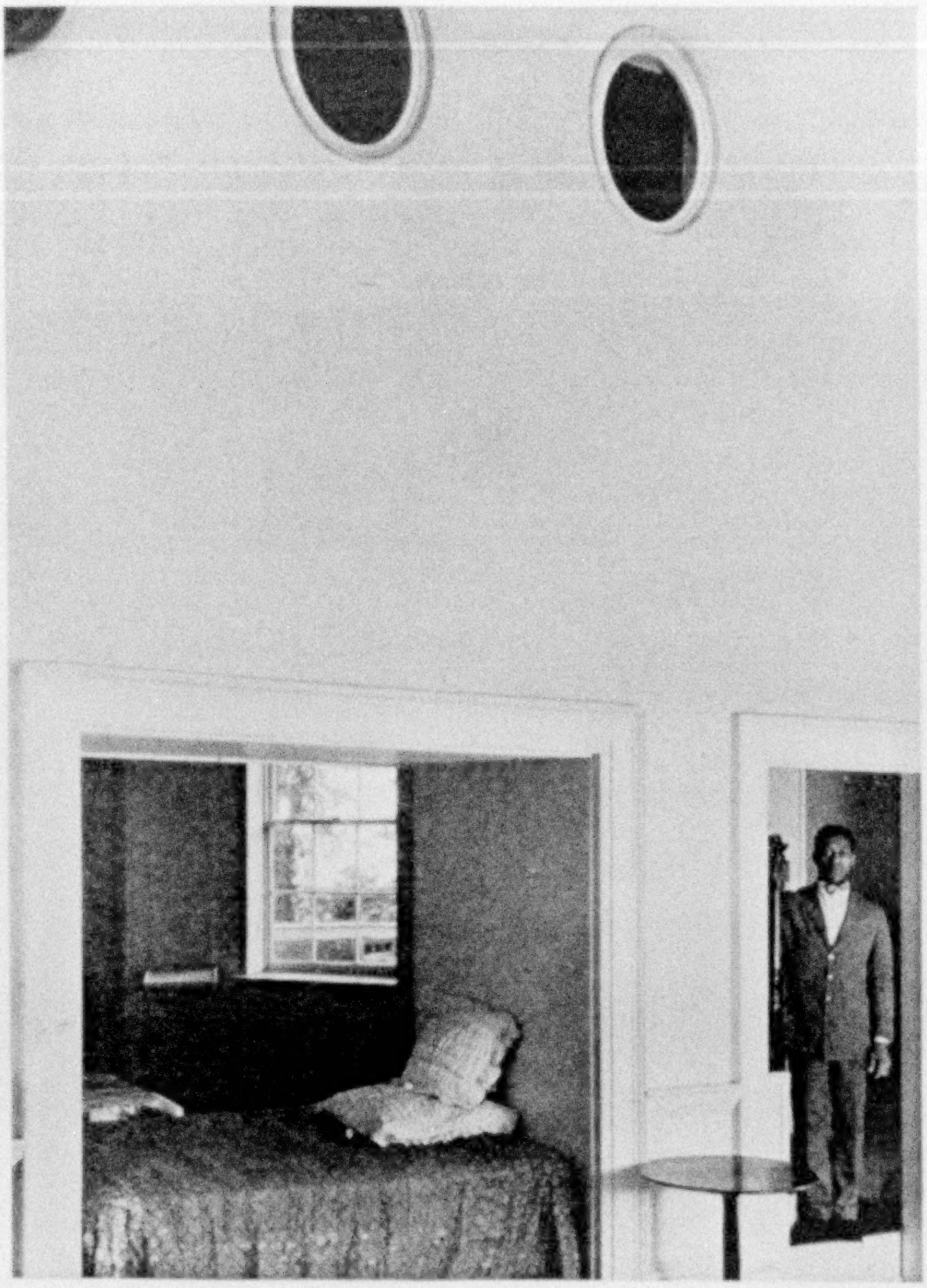
ONLY PERSONS OF SLENDER BUILD MAY GET THROUGH HERE COMFORTABLY

The stairways at Monticello are extremely narrow. Why the gifted architect who designed the house made them so has never been explained (see text, page 486).

Being an artist and imaginative, Jefferson loved to create these illusions, and in yet another way he made his house look smaller than it actually is. He must have chuckled as he found people falling into his trap of having them believe that it is a one-story house, whereas in fact it has four stories.

The lowest floor is a basement, on the same level with all the terraced domestic quarters. The main story is lofty, and through the center of the house it rises into what is elsewhere, under the same roof, the third story. The top, or fourth, story is artfully concealed by the pediments of the two porticoes and by the balustrade, which edges the roof line (see Color Plate XVII).

When we come to enter we discover that there is no back to Monticello. There is, of course, a front. There are, indeed, two fronts, as was the case with nearly all major plantation houses. These were the approach front, to which callers and guests came, and the opposite, or private, front,



Photograph by Edwin L. Wisherd

MONTICELLO'S FAMOUS MASTER DIED ON THIS BED

The pillows are those upon which Jefferson's head rested as he breathed his last and the bedspread was also used by him (see, also, Color Plate XXIV, upper). Pictures originally hung where the peculiar "portholes" now appear. They open from a tiny upper room, the use of which has not been satisfactorily explained. One legend says that the master sometimes retired there to escape unwelcome visitors, while another makes of it a hiding place for bodyguards; but neither of these explanations is in accord with the character of Jefferson.

where, especially when screened by a portico, the family gathered.

Entering Monticello then, as the public enters to-day, by the approach front, one passes under the lofty ceilings of the two central saloons, to the left into Jefferson's bedroom and study and library and into the bedroom of his daughter Martha. On the opposite end of the house one finds the dining room, the breakfast room, and two other bedrooms, which he named the Madison and Monroe rooms, after his two neighbors who so frequently occupied them.

In the two stories above are other bedrooms, reached by two stairways which are most comfortably ascended by those who have the slender proportions of a match, for certainly they are the narrowest stairways which ever were put into a gentleman's house. If Jefferson, who in every other way revealed himself as a gifted architect, ever explained his reason for these stairways, that explanation has so far refused to come forward and it is still a mystery (page 485).

MANY OF JEFFERSON'S INVENTIONS ARE INCORPORATED IN HIS HOUSE

Every step about Monticello is a revelation of that celebrated man who built it and lived in it. A dozen objects and devices there tell us that Jefferson was not only an able architect, but that he was an inventor as well, and that his home was his playhouse. He himself said that politics was his business, but science was his delight.

In his floors he used the curious expedient of planks with double grooves, and held them together by inserting detached "tongues." In the ends of his dining-room mantel, ingeniously concealed in the paneling, are set two tiny dumb-waiters, by which the wine and liquor bottles traveled to and from the cellar.

In perfect working order to-day, we find his own installation of a concealed

Photograph by Edwin L. Wisherd

JEFFERSON'S MUSIC RACK AND TABLE WITH ADJUSTABLE TOP

The master of Monticello was very fond of music. He played the violin in his early days, and from the time of his marriage he always had at least one harpsichord in his home.

mechanism for double glass doors, which move in unison when only one of them is touched. It has been suggested that these may have been the forerunners of our present-day trolley-car doors, which are operated by a similar device (see p. 499).

Jefferson had not a single bedstead in his house. In showing a guest to his bedroom he must have enjoyed the expression of surprise at finding a chamber without any bed. But Jefferson had not ignored such an insistent natural function as sleep. He would part a hanging and disclose the bed, set in an alcove just the dimensions of the mattress; but that comfortable article knew no bedstead; it lay on a mesh of rope laced on hooks sunk into the walls.

We find Jefferson's own bed, in an alcove in the wall between his bedroom and his study, rather better off for ventilation, as it is open on two sides; and more convenient, too, for as the spirit moved him he could get up immediately on one side into his bedroom or on the other side into his study. It is said that he installed a mechanical apparatus to raise this bed to the ceiling of its alcove, so that during the day he enjoyed a broad passageway between the two rooms adjacent to it.

In the east wall of the house, under the portico, is a large clock, with a double face, ingeniously placed so that he could see one face while he was out of doors and the other when he was indoors. Near the latter is a "fox-and-geese" ladder to reach the mechanism. This is one of Jefferson's most ingenious devices, for the rungs are all hinged, the uprights are grooved, and the whole thing folds up into the appearance of a single, solid, slender piece of mahogany (see page 484).

Above the same portico is a weather vane, but its mechanism extends down to the out-of-door ceiling, where he installed a dial and indicator, so that he could inform himself of the direction of the wind without leaving the protection of his own roof (see Color Plate XVIII).

THE OWNER OF MONTICELLO LOVED A GADGET

Jefferson designed and built several curious tables. One of these had a revolving top, so that sitting by it he could, without

rising, bring to his hand objects on the opposite side of it—a sort of first cousin to "Lazy Susan." Another of his tables had hollow legs, in which were rods supporting the writing surface; but these rods were so hinged to the top that he could not only raise and secure the top at a height which made it convenient for him to write or read or draw at it when standing up or sitting down, but he could also tilt the top at any angle he found convenient.

Obviously he belonged to that large brotherhood which loves a gadget. Quick to appreciate ingenious novelties, he picked them up wherever he found them, and not only brought them home, but he improved them. One such contrivance was an attachment which he found in Milan, for the hub of his carriage wheel to tell the number of revolutions made—obviously the granddaddy of the modern speedometer. Another was a polygraph, a writing machine, which made two copies with only one writing (see Color Plate XXIV). Jefferson improved on this, so that his polygraph made four copies.

JEFFERSON THE FARMER

As a planter he showed the same originality and love of the ingenious. He took great interest in the theory of farming. He seized and experimented with every new idea. He imported the most improved machinery. He even invented a moldboard for the plow. From Europe also he brought in new varieties of grain, fruit, and vegetables. He planted mulberry trees for silk culture and a vineyard for wine.

In his youth he fell in with the then current policy of the southern planter and taxed his soil heavily for corn and tobacco. Later he saw the error of this and banished both. He wrote to Washington: "I have determined on a division of my farm into six fields, to be put under this rotation: first year, wheat; second, corn, potatoes, peas; third, rye or wheat, according to circumstances; fourth and fifth, clover where the fields will bring it, and buckwheat dressings where they will not; sixth, folding, and buckwheat dressings."

There was no longer the reason for raising heavy tobacco crops that urged the colonists to this policy, for that plant was no longer a currency; yet, in his diary for 1799, on September 8, he noted that he had at Monticello more than 13,000 pounds of tobacco made and unsold. At the same time he had on hand at Poplar Forest, an estate near Lynchburg, more than 30,000 pounds of the same crop.

It was the old trap which has caught farmers since plows have turned soil: When farmers stopped raising tobacco the price soared. Then Jefferson and apparently every one else at once produced tobacco—overproduced it, of course; hence his bulging tobacco barns. And tobacco is a crop that cannot be fed.

One sound agricultural theory Jefferson stood for firmly, and that was deep plowing; but the perversity of his labor broke his spirit on this point, for they continued merely to scratch the surface. Nearly twenty years later he was driven to raising cotton, because he had his slaves to clothe and his spinners to keep busy, and no cotton could he buy.

TRIED TO CURTAIL SLAVERY

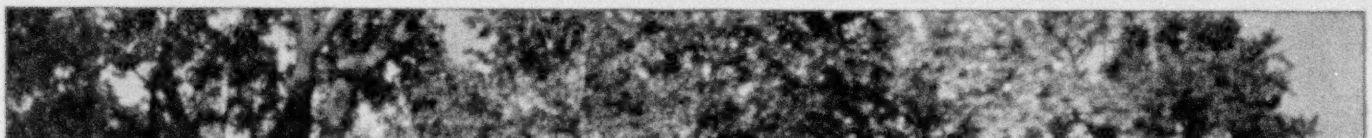
Monticello and all Jefferson's other lands were, of course, operated with slave labor. He was no more enamored, however, than were most of the other Virginia planters, with the unnatural system under which he was obliged to operate, and he studied continually for expedient remedial legislation. He was the author of a bill, passed in 1778, forbidding the further importation of slaves into Virginia. He made another effort against slavery in Congress in 1783, which was thwarted. When Virginia ceded her hinterland in the Northwest and it was divided into new States and Territories, he drew a plan for its temporary government. He sought in this to make slavery illegal in this section of the country after the year 1800, but in this he was again outvoted.

Compelled to operate under the system, however, he never bought slaves as an investment. His labor was carried on by those whom he inherited from his father or who came to him with his wife's property, and by those whom in vagrant emergencies he was obliged to purchase for service on his own acres. It appears, however, that he sometimes leased his negroes. An entry in his farm book gives a list of 47 negroes leased to one J. H. Craven, of whom few were under 50 and 21 were over 90 years of age.

He inherited 30 slaves on the death of

WHERE THE SAGE OF MONTICELLO ROMPED WITH HIS GRANDDAUGHTER

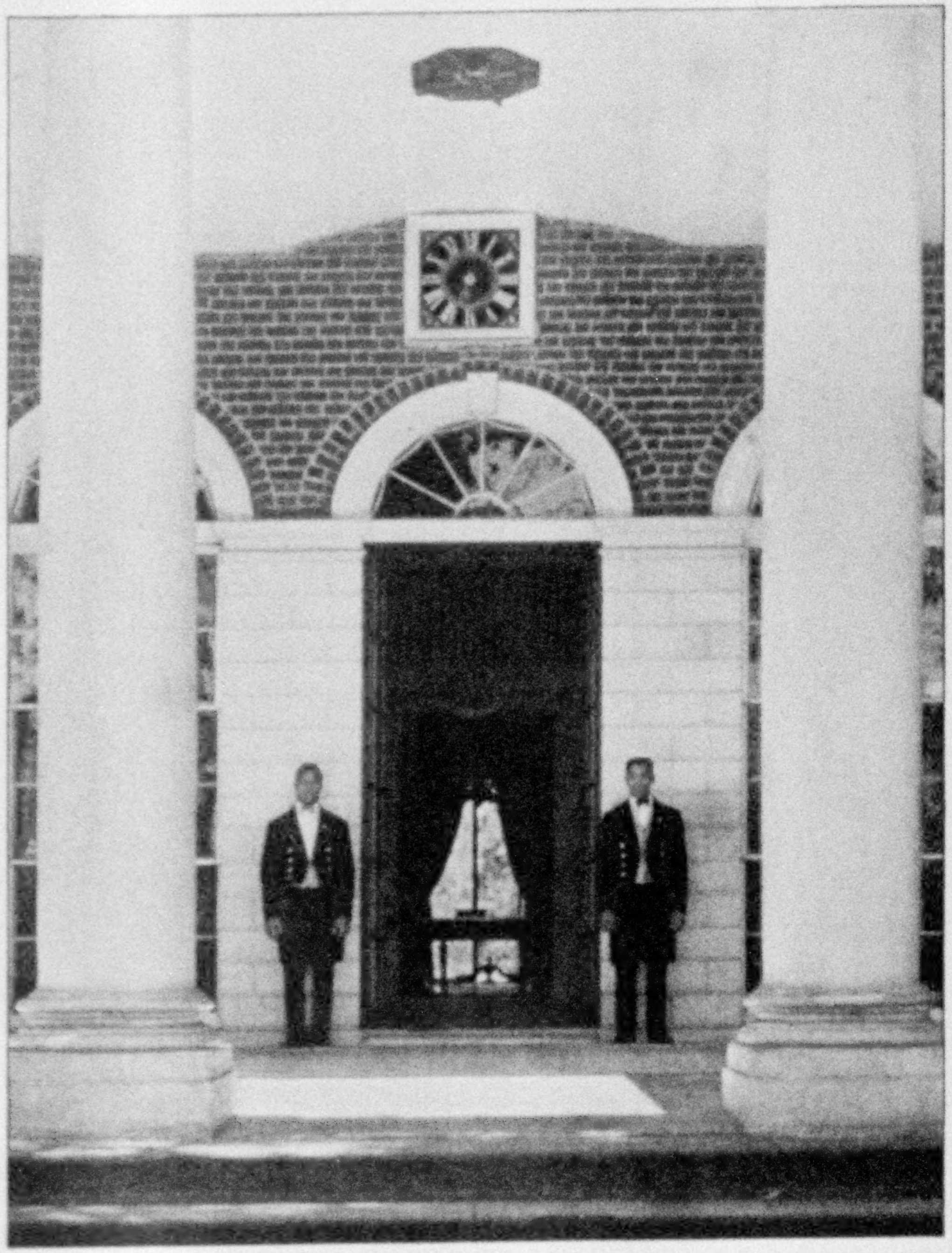
"Dear little Anne," wrote Jefferson of his granddaughter Anne Randolph, "with whom even Socrates might ride on a stick without being ridiculous."

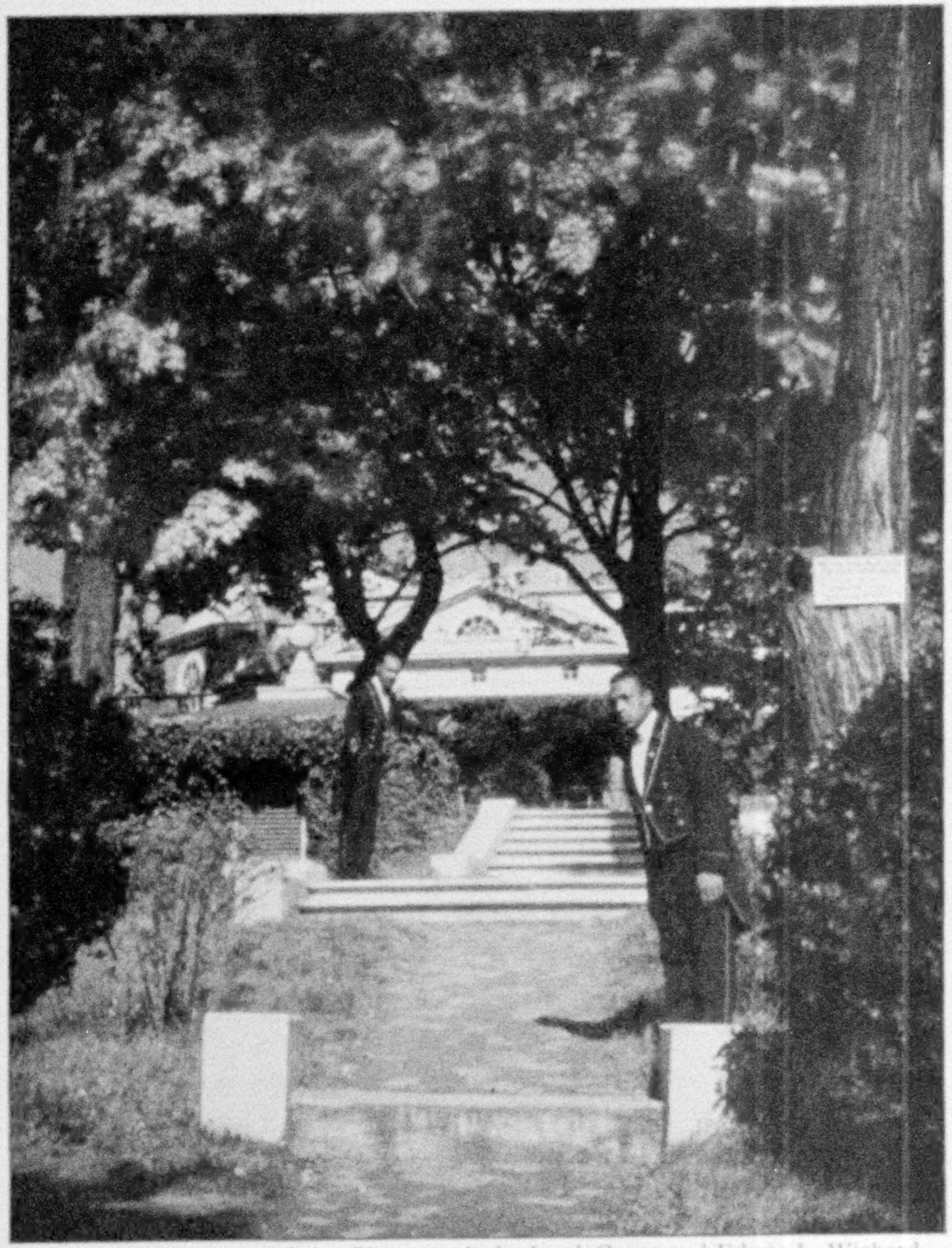


© National Geographic Society Natural Color Photographs by Edwin L. Wisherd

HOUSEHOLD SLAVES OCCUPIED THESE QUARTERS

Jefferson held the deep affection of his slaves. When he returned from France, the whole plantation force and house staff came down the mountain to meet him, alternately laughing and crying with joy at seeing their master once more.





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Natural Color Photographs by Jacob Gayer and Edwin L. Wisherd

JEFFERSON WISHED HIS HOME TO BE THE MOST BEAUTIFUL IN AMERICA

Monticello was the realization of a dream of long standing, and to its design and the superintendence of its construction the owner devoted many years. On the left is the main doorway with a two-faced clock above it, the other dial being inside the reception hall. In the ceiling is a clock face indicator connected with the weather vane on the roof, which enabled Jefferson to note the direction of the wind without leaving the building. At the right is the present-day approach to the mansion from the overseer's house.

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Natural Color Photograph by Charles Martin

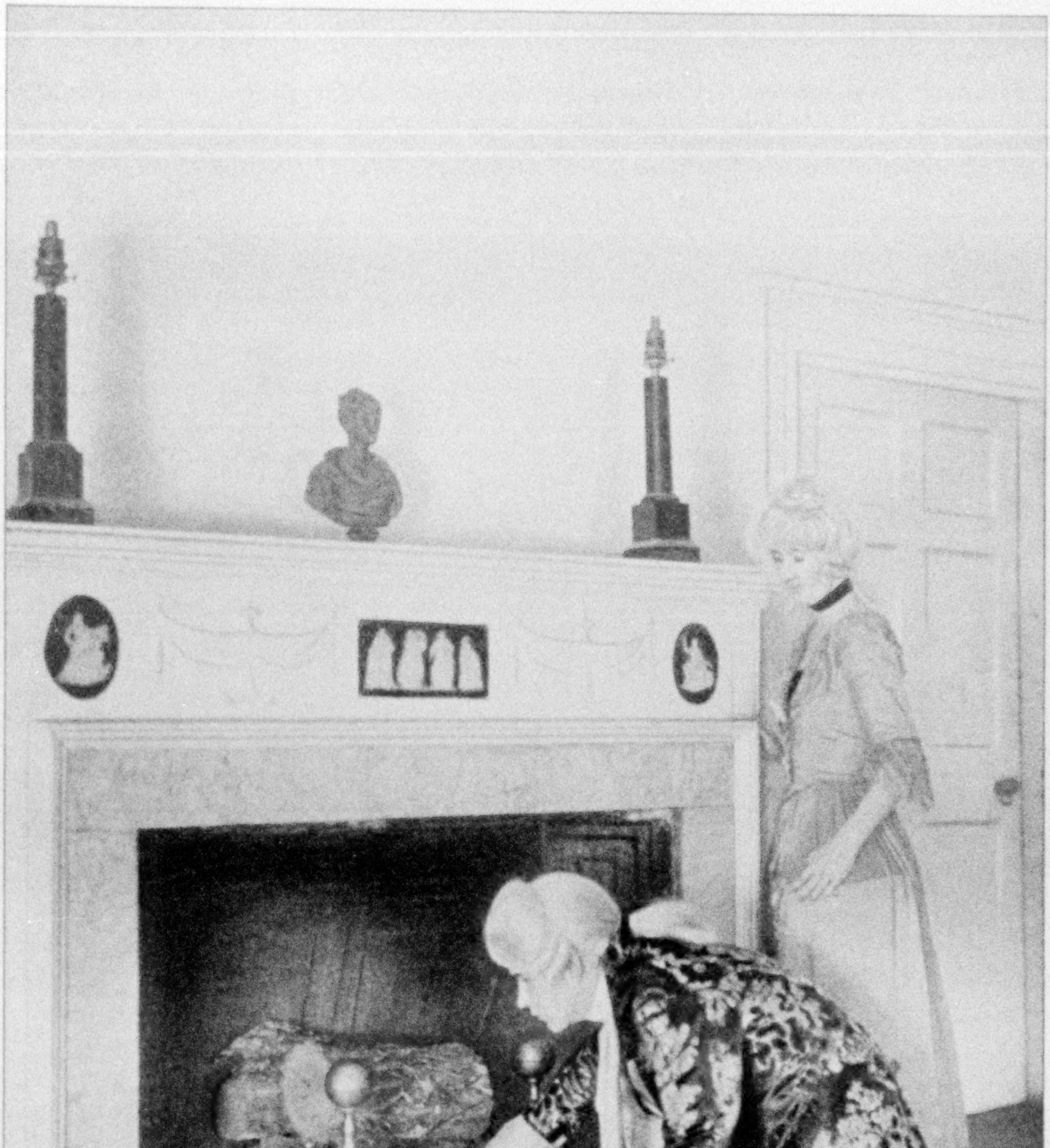
AS IN JEFFERSON'S TIME

These young people came from Richmond, where they had attended the Virginia Ball, to enact upon the grounds at Monticello scenes reminiscent of the early days of the Republic, for presentation to members of the National Geographic Society in their Magazine.

© National Geographic Society Natural Color Photograph by Edwin L. Wisherd

AN ORIGINAL MIRROR REFLECTS THE BEAUTY OF OTHER DAYS

Jefferson's home was furnished in excellent taste. Many of its adornments he obtained on his travels and public missions abroad. The mirror is one of a pair brought from France, and the painting reflected in it is "The Daughter of Herodias with the Head of John the Baptist," recently restored by a generous donor to its original place on the walls.



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OPEN FIRES FURNISHED THE HEAT FOR COLONIAL MANSIONS

Monticello's broad acres provided fuel for its numerous "open hearths." The dining-room mantel has the original Wedgwood plaques designed for Jefferson. The bust, modeled at Monticello, is of Anne Cary Randolph (see also Color Plate XVII). The two lamps, like the mirror (Color Plate XX), were brought home from Paris.

© National Geographic Society

HISTORY WAS MADE IN THIS TINY BUILDING

Here Jefferson planned "A Summary View of the Rights of British America," which resulted in his becoming the subject of a Bill of Attainder by the British Government and in his selection to write the Declaration of Independence.

Natural Color Photographs by Charles Martin and Jacob Gayer

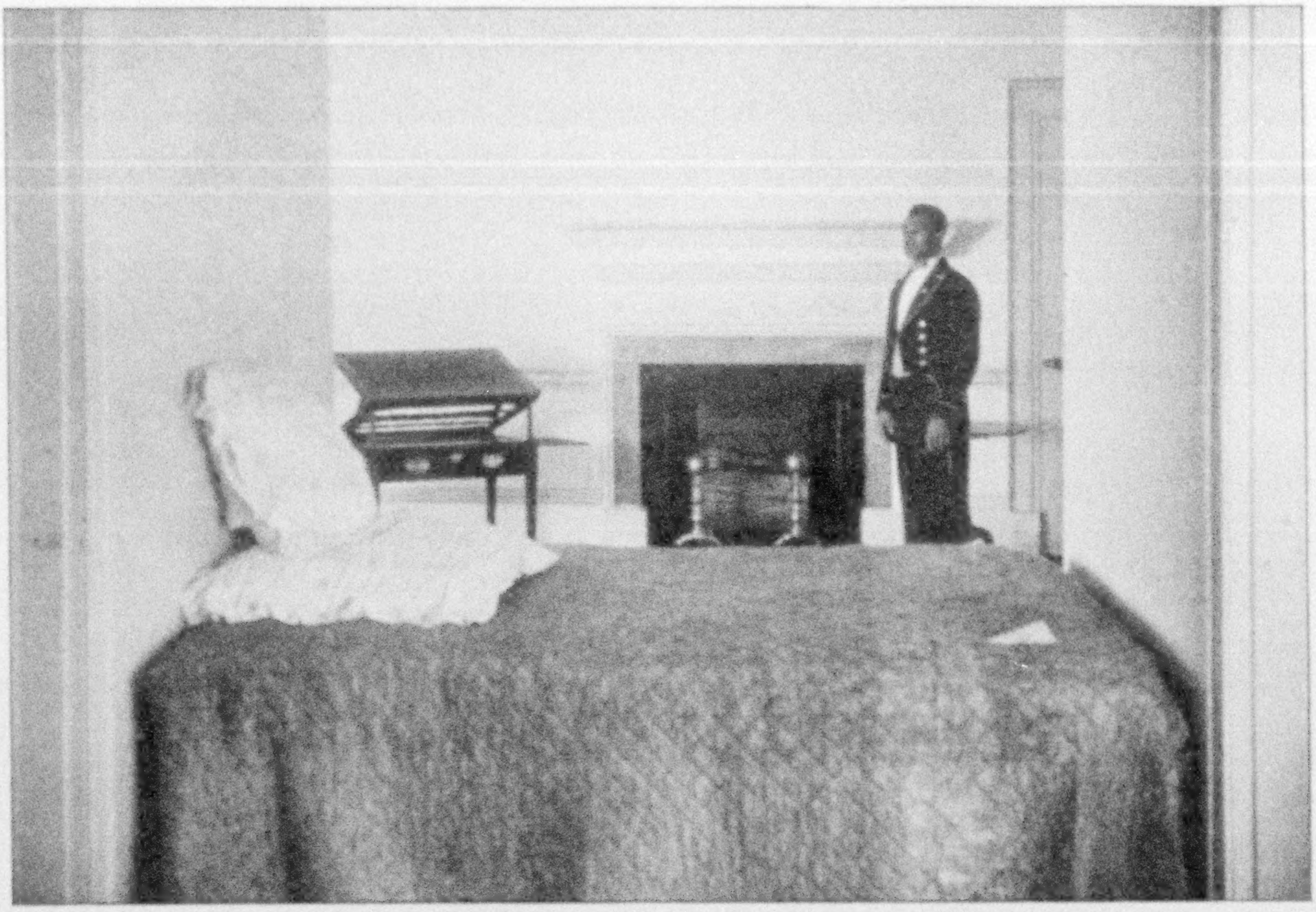
HONEYMOON COTTAGE

Jefferson brought his bride, Martha Wayles Skelton, to this temporary home. "Who," asks Parton, "could wish a better place for a honeymoon than a snug brick cottage, lifted five hundred and eighty feet above the world!"

© National Geographic Society — Natural Color Photograph by Charles Martin

APPLAUSE FROM MONTICELLO'S PORTICO GREETS CONTINENTALS PASSING IN REVIEW

Such a force would have been welcome in the spring of 1781, when Tarleton's British raiders almost succeeded in capturing Jefferson (then Governor of Virginia), who, with the legislature, had been forced to retire from Richmond to Charlottesville to escape the enemy (see also Color Plate XIX). This and other costume scenes in this group of natural color photographs were posed exclusively for the National Geographic Magazine by Miss Frances Elinor Fry, with the coöperation of the Virginia State Chamber of Commerce.



WHERE JEFFERSON SLEPT

The master's bed opened on two sides, into his bedroom and into his private study. According to local tradition he had it so rigged that during the day it could be raised to the ceiling, leaving a passageway between the rooms. He died on this bed on July 4, 1826.

© National Geographic Society Natural Color Photographs by Edwin L. Wisherd

HE OPERATES ONE OF JEFFERSON'S INGENIOUS MECHANICAL CONTRIVANCES

The mystery of duplicate letters in Jefferson collections was solved when the polygraph was discovered and his own description of how he used it was found. By means of this machine the writer can produce two identical pages at the same time. The chair also was designed by Jefferson.

his father. These by natural increase had nearly doubled their number in 17 years and in 1815 they had increased to 102. At the same time he owned 57 at Poplar Forest and 28 at Beaver Creek; but he had owned as many as 128 at one time at Monticello alone.

He had the negroes' houses built close together, so that "the fewer nurses may serve, and that the children may be more easily attended to by the superannuated women." Children served as nurses until they were 10 years old. Between the years of 10 and 16 the boys went into the nailery and the girls spun. After 16 both sexes went to work on the ground or learned trades.

Of Jefferson's treatment of his slaves, Edmund Bacon, for many years an overseer or manager at Monticello, said:

"Mr. Jefferson was always very kind and indulgent to his servants. He would not allow them to be at all overworked and he would hardly ever allow one of them to be whipped. His orders to me were constant, that if there was any servant that could not be got along with without the chastening that was customary, to dispose of him. He could not bear to have a servant whipped, no odds how much he deserved it."

A PERSECUTION OF LETTERS

Jefferson's daily life at Monticello had almost the regularity of routine. His early morning hours he spent in his library attending to his correspondence. The load of letters was never light, and he penned full-length replies. In 1822 he wrote John Adams, with whom he maintained a particularly voluminous correspondence, that he "suffered under a persecution of letters":

"I happened to turn to my letter list some time ago, and a curiosity was excited to count those received in a single year. It was the year before last. I found the number to be one thousand two hundred and sixty-seven, many of them requiring answers of elaborate research and all of them answered with due attention and consideration."

After breakfast he walked over the mountain, inspecting his trees and gardens. The middle period of the morning he retired to his library or to his workshop. His farm manager said that Mr. Jefferson "was nearly always busy on some plan or model."

The hours immediately before dinner he spent in the saddle, riding down into the lowlands to oversee his fields or trailing the more than 40 miles of bridle paths which he had developed over his estate.

DELIGHTED IN HIS GRANDCHILDREN

The dinner hour found him at the head of his table, surrounded by the entire Monticello family. This was a changing unit. His wife left him three young children, but one of them soon followed her. The remaining two, Martha and Maria, his "Patty" and "Polly," grew to womanhood. As long as they were unmarried they lived with their father, and, in speaking of his devotion to his two little girls, a friend of the family said that "he was mother as well as father to them." They were both married in Monticello and their weddings are the only ones known to have been solemnized in the mansion.

The girls tried to establish homes of their own, but for one reason or another, not least their lonely old father's need of them, they seem to have spent most of their time at Monticello. Martha Randolph succumbed to her father's need of her, and she and her family were obliged definitely to make it their home.

Soon the number about the table received the addition of grandchildren and great-grandchildren. This delighted Jefferson. He never had too many of them. In 1813 he wrote this of his family to Abigail Adams:

"I have compared notes with Mr. Adams on the score of progeny and find that I am ahead of him, and think I am in a fair way to keep so. I have ten and a half grandchildren and two and three-quarters great-grandchildren, and these fractions will ere long be units. . . . These young scions give us comfortable cares when we cease to care about ourselves."

A HOST OF VISITORS TAXED MONTICELLO'S RESOURCES

After dinner the last hours before sundown were spent with these children and grandchildren, in summer promoting their games and races on the terraces or on the green lawn, in winter gathering them about the open fire and teaching them to

Photograph by Charles Martin

LOOKING FROM MONTICELLO TOWARD THE JAMES RIVER

In the distance is Willis Mountain, of which Jefferson wrote: "There is a solitary mountain, about 40 miles off in the south, whose natural shape, as presented to view there, is a regular cone; but, by the effect of looming, it sometimes subsides almost totally in the horizon; sometimes it rises more acute and more elevated; sometimes it is hemispherical; and sometimes its sides are perpendicular, its top flat, and as broad as its base. In short, it assumes at times the most whimsical shapes, and all these, perhaps, successively in the same morning."

Photograph by Edwin L. Wisherd

GLASS DOORS ARE AMONG THE "GADGETS" AT MONTICELLO

A concealed mechanical device by which double glass doors move in unison when only one of them is touched is in as perfect working order to-day as when Jefferson installed it (see text, pages 486-487).

Photograph by Jacob Gayer

THIS DUMB-WAITER WAS A JEFFERSONIAN DEVICE

The lower terminus was in the wine cellar, from which the apparatus brought up full bottles to the dining room and sent back empties on the return trip (see text, page 486).

Photograph by Edwin L. Wisherd

LATTICEWORK PROTECTS MONTICELLO'S LOW WINDOWS

Tradition says that these safety measures were taken after one of Jefferson's distinguished visitors, nodding in his chair after dinner, lost his balance and almost toppled into the garden.

play "Cross-questions" or "I love my love with an A." When the candles were brought he took up his book and read until the drowsy hour of bedtime.

Such was the life in the home privacy, which his fame, however, often disturbed. An endless procession of visitors, invited and uninvited, came to see the "Sage of Monticello," as he came to be called. There were office-seekers, lion-hunters, relations and friends, artists and biographers, young Daniel Webster and elderly Marquis de Lafayette, James Madison and James Monroe, foreigners and natives, the great and the near-great, notables and nonentities.

They came with horses, servants, and family and expected to be housed and fed. Jefferson had in his stable a surplus of 26 stalls over his own needs. They were often inadequate for the visitors' cavalcade of horses. There were occasions when beds and food had to be found for 50 house guests on a single night, not all invited by any means.

JEFFERSON'S LIBRARY BECAME THE NUCLEUS OF THE LIBRARY OF CONGRESS

It was this pest of visitors that reminded Jefferson that he had 5,000 acres down in Bedford County, and he planned and there built himself another house, called Poplar Forest, an exquisite architectural trifle, and thither he fled with one of his daughters or grandchildren, three or four times a year, to enjoy respite from the persecutions of fame.

Naturally one of the great features of the house of so scholarly and studious a man as Jefferson was his library, or possibly more properly libraries, for there were two of them. The first one grew from 1,256 volumes in 1773, a year after his marriage, "exclusive of music and books at Williamsburg." In 1814 he made a later catalogue of his books, which attracted widespread attention for its ingenious subdivisions under Memory, Reason, and Imagination, and at that time he had between 9,000 and 10,000 volumes.

It was this library which became the foundation of the present Library of Congress in Washington. In 1814 the British,

having entered Washington, fired the Capitol, in which the books were then housed in a single chamber. That collection was thereby almost entirely destroyed. Jefferson was at the time badly in need of ready money, and he offered his Monticello library intact to Congress, for which it paid him $23,950.

Photograph by Charles Martin

THE TOMB OF THOMAS JEFFERSON AT MONTICELLO

The inscription on the monument was written by Jefferson himself, and sets forth the three things which he considered the outstanding achievements of his career—the writing of the Declaration of Independence, the drafting of the Statute for Religious Liberty in Virginia, and the founding of the University of Virginia (see, also, text, page 463).

A CIPHER DENOTED JEFFERSON'S OWNERSHIP OF A BOOK

The shelves at Monticello were not long vacant. The "books at Williamsburg," to which he had referred in 1773, were his heritage under the will of his friend and preceptor at law, Chancellor George Wythe. After waiting in storage down in the little Tidewater capital more than 40 years, they were brought up to Monticello to take the place of the books packed off to Washington, and it was said that this second library was so extensive that it "nearly filled the room of the one sold to Congress."

Jefferson's ingenuity extended even to his manner of denoting his ownership of a book. He did not follow the usual custom of writing his name or pasting his bookplate inside the cover. He used a cipher, based on the "signature" initials, I, J, and T, which appeared in books of his period or even later. Each of the folded sheets bearing a group of pages is called a signature, and it was in those days lettered alphabetically to denote sequence in binding. These initials were just visible, very near the stitched edge of the bound pages.

As each book came to Monticello, Jefferson would turn to the signature initial J, and before it he would ink in the letter T to form his own initials, T. J. Then, also, if the book contained so many signatures as to include T, he would ink in after that letter a J, again forming his own T. J. If it were a small book and the signature went no farther than I, he inked in the letter T before this letter. This is the key by which collectors still identify books from the library at Monticello.

Old age eventually crept on Jefferson,

Photograph by Charles Martin

THE LAWN OF THE UNIVERSITY OF VIRGINIA, FOUNDED BY JEFFERSON

The photograph was taken from the portico of the library (see page 444) looking toward Cabell Hall. Note the colonnaded professors' and students' quarters at the left.

but as long as he lived the spirit of youth pervaded Monticello. We learn of it first as the playground of his own boyhood. One of the next appealing memories of it is his youthful honeymoon on the snow-bound mountain under the stars. Not long after, it became the playground of his own children, and thereafter they filled it with gayety and romance until their children and grandchildren carried on the tradition of youth about the great house.

The older Jefferson grew, the more young people he had about him, not alone his own family and their friends, but also eventually the students of "his university," as soon as the University of Virginia came into being. One of those boys later left a memoir of one of those youthful assemblies at Monticello in the last year of Jefferson's life, in which he said:

"At the first session of the University I was entered as a student, and Mr. Jefferson was always pleased to have us students at his table. Upon these occasions we were generally seated around the table, when Mr. Jefferson would enter and walk directly to an adjoining table, especially prepared for him, and upon which were placed two lighted candles and a small vial by his plate. He would then say:

"'My daughter, I perceive there are several young gentlemen at the table, but I do not see well enough to see who they are, so you must tell me their names.'

"Whereupon his daughter would lead him up to each young gentleman, who would in turn rise, when Mr. Jefferson would shake hands and pass a pleasant word with him. At the close of the repast, as his own hand was too trembling, his daughter would pour from the vial into a tumbler a few drops of medicine to produce slumber in case he should be wakeful, and then he would take up the tumbler and a candle, make a stately bow to the assemblage, and retire to his bedroom."

DEATH CAME ON THE ANNIVERSARY OF HIS GREATEST DAY

Jefferson died shortly after, about the noon hour, on July 4, 1826, the 50th anniversary of the day which he did so much to make memorable. On the same day, almost at the same hour, in far-away Massachusetts, another patriot father and the friend of his old age, John Adams,

died exclaiming, "Jefferson still lives!" Monticello's master was buried a few hundred yards from the house he planned, built, lived in, and loved so much, in the Jefferson family burying ground, at the side of his wife (see illustration, page 501).

He left Monticello to his only surviving child, his daughter, Martha Jefferson Randolph. It was, however, unproductive and she was without adequate independent means to live there. The first winter's snows were white on Jefferson's grave when the interior furnishings of the mansion went under the auctioneer's hammer.

The house was empty during the next five years, when the estate was bought by a Charlottesville druggist, who gave for it his business in town and $2,500 in cash. This owner cut down most of the superb trees on the summit and made an effort to cultivate the silkworm there. He soon wearied of his bargain and offered Monticello for sale.

HOW MONTICELLO WAS REDEEMED

Friends and admirers of Jefferson and his family had a project completed to buy the place outright and present it again to Martha Randolph, when Uriah Levy, for some years on active duty as an officer of the United States Navy, stepped in and purchased it. This was just 10 years after Jefferson's death. Levy kept title to it for 25 years. The time of his actual residence there was brief.

The place was abandoned, so far as proper occupancy and upkeep were concerned, until 1889, and a less honest building would have tumbled into its own cellar. In that year Uriah Levy's nephew, J. M. Levy, of New York, bought all quitclaims and brought friendly suits which perfected his title to it. Under his care Monticello's decay was arrested and he gave it necessary repairs and some embellishments.

At the beginning of this century sincere and untiring efforts were made to rescue Monticello from private ownership and have the National Government or the people of the Republic, by popular subscription, take it in hand as a suitable memorial to the great man whose association with it so distinguished it. They were all unsuccessful until 1923.

In that year there was organized a group of patriotic citizens who reflected and united the aspirations of all who wished to see Monticello redeemed. In a little more than five years they have purchased the estate under a contract to pay $500,000 for it; conducted annual national campaigns of education and solicitation, which have accumulated all the purchase price except a bonded indebtedness of $126,500; restored the mansion and supporting buildings to their state of original security and simple elegance, and drawn into it, from generous donors, much of the furniture and furnishings which Jefferson himself placed there and used.

For all this his admirers are under obligation to the splendid organization and zealous efforts of the Thomas Jefferson Memorial Foundation, under the presidency of Stuart G. Gibboney; to its other officers and members, and to the contributors in every part of the country, who have helped them to make possible this reclamation and restoration of the famous seat and its dedication as a national shrine, and so to give renewed national consciousness to our inheritance in the character and achievements of the master of Monticello.

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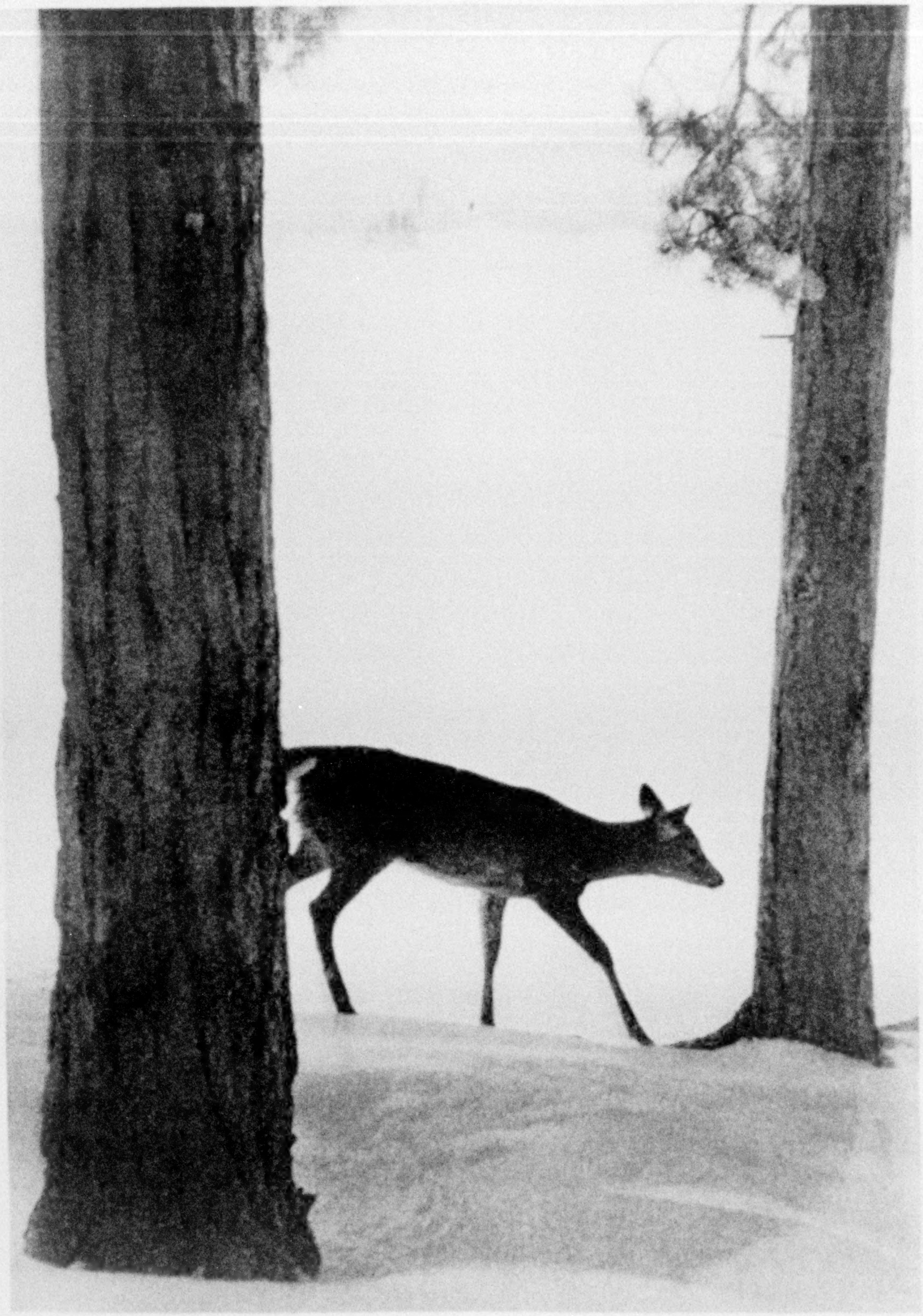


A WINTER SILHOUETTE

In the deep of winter, deer gather in "yards" near deciduous trees and bushes upon which to feed. They make paths leading in all directions to the browse. In heavy, untrammeled snow, especially if crust forms, the mightiest buck is practically defenseless. He sinks in at each step, while dogs or other lighter antagonists run easily over the surface (see text, page 513).

IN THE ALLAGASH COUNTRY

By Kenneth Fuller Lee

With Illustrations from Photographs by the Author

THE Allagash, winding its silvery path down through Maine's spruce-clad hills from Mud Pond Carry, through Chamberlain, Eagle, and Churchill lakes; racing madly into the eight-mile strip of white water called Chase Carry; widening out again at Umsaskis and Long lakes, and then careering 60 miles downhill till it enters the St. John River, offers one of the most popular canoe trips in all the world.

Oddly enough, Allagash Lake, in which the river has its source and from which it takes its name, is rarely seen by tourists who annually make the trip down this wilderness waterway. The usual route brings the sportsman from Mud Pond Carry over to Chamberlain Lake, and thence down through Eagle Lake to Churchill without entering Allagash at all.

Prior to the coming of the outboard motor, the trip required from two to three weeks of strenuous work with pole and paddle in the hands of expert guides. Only experts undertook the trip, because of the character of the rapids encountered along the route. Chase Carry alone saw its quota of wrecked canoes and lost camping outfits every year, the swift current and treacherous rocks taking regular toll from incautious voyageurs.

The advent of the motor-equipped canoe has made it possible to cram this entire trip into four days. However, it is a poor way to pass thus through a country of abiding charm and natural interest, for the sputtering motors alarm all forms of wild life; the deer seek cover long before the traveler catches sight of the bobbing "flags," and even the wild ducks scatter in hasty flight when the woodlands echo to the throbbing beat of a gas-driven canoe.

A YEAR IS NEEDED TO KNOW THE CHARM OF THE ALLAGASH

Traveling in the old style, parties of sportsmen have frequently reported seeing as high as 300 deer in the course of a trip down the river. To-day it is not uncommon to see herds of 10 or 15 feeding along the shores of Churchill, Umsaskis, or Long lakes, and during the hot summer months the Musquacook Deadwater is fairly lined with the feeding animals.

To know the Allagash as it really is, one must live up there for at least a year and learn the charms that varying seasons bring with them in the great forested areas along the river's banks.

In the early spring of 1927 I went up the Allagash from Fort Kent, on the Maine-Canadian border, in a motor canoe, which was heavily laden with supplies and my camping outfit. It was still winter in that northern country. My companion, Leverett Byram, and I were forced to break ice across Round Pond and Long Lake on our way in to Umsaskis, where we planned to establish our base camp. At Allagash Falls we dragged our canoe and its load up over an ice wall more than eight feet in height.

WE BUILT A LOG-CABIN HOME IN THE WILDERNESS

Using the outboard motor, we took three days to traverse the 60 miles of spring flood that was the Allagash, and when we arrived at Umsaskis we immediately set about building the log cabin which was to be our home in the wilderness. Hewing straight spruces 28 feet in length, we peeled these logs and from them fashioned a tight cabin, the full length of the logs being utilized. The camp was 18 feet in width and 20 feet in length, with an 8-foot porch facing the lake (see p. 510).

I took pains to see that the camp had plenty of windows, for a dark camp is depressing in the extreme. Single panes of glass, each 25 inches square, were used for the five windows. Our front door had a similar pane in its center; so that even in the dark days of the following February the cabin was well lighted.

As we worked on the camp, deer fed all about us, paying little attention to the sound of our voices and the clamor of our axes and saws. When we felled trees the animals would feed on the tops within arm's-length of us. A cock partridge (as the ruffed grouse is known in these

Photograph by R. G. Stubbs

MAINE'S WOODLAND LAKES ARE FAMED AFAR

West of the Allagash route, as generally traveled, lies Allagash Lake. Along its wild shores animals, birds, and fish thrive under nearly ideal natural conditions.

Northern woods) drummed on his log within 50 feet of the camp, and Leverett and I suspended operations frequently to watch the big bird strutting pompously to and fro before sounding his mating call.

Early in July Mrs. Lee came up the river to join me, bringing in a canoe-load of equipment for our home in the wilderness.

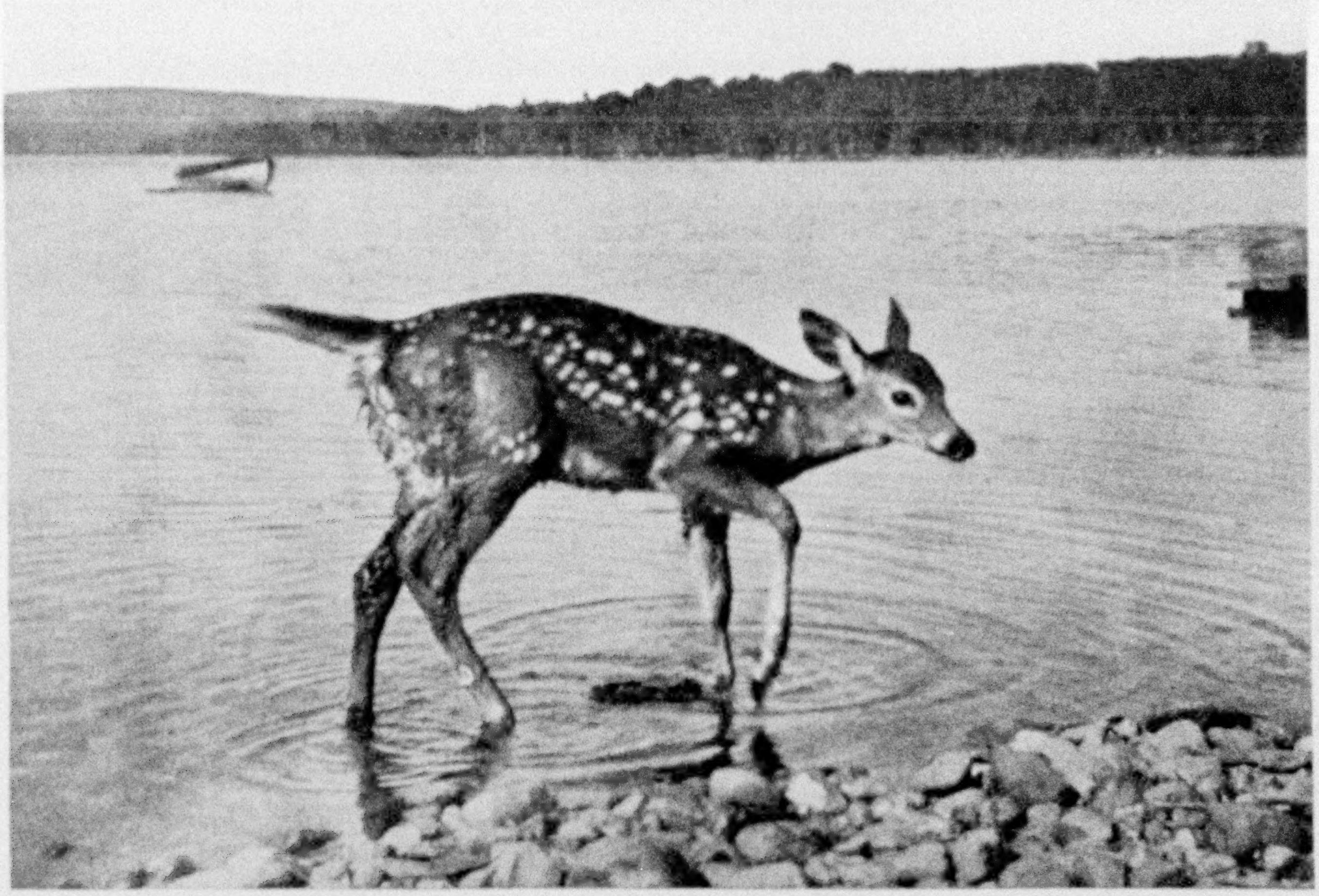
We strung a high aërial between the tops of two big spruces, put the end of our ground wire in the spring, and got excellent radio reception from the very first turn of the dial. We received the daily news from WPG, Atlantic City, at 7 p. m., and were thus enabled to keep in touch with the outside world in a country where it frequently took seven days for mail to reach us.

FIVE DEER BECOME REGULAR BOARDERS

The deer in our immediate neighborhood seemed willing to become better acquainted with us. Mrs. Lee fed them "boat ends" of bread lightly sprinkled with salt. They were very fond of this delicacy, and in a few weeks we had five that could be termed regular boarders. Four of them were does, two young deer and a pair of older ones. The fifth was a fat little buck, far tamer than the others. We named him Hosea, and before we had fed him a dozen times his heart was so thoroughly won that he would take crackers from Mrs. Lee's hands and respond to a whistle, head and tail up, as he pranced gaily toward the cabin.

Directly behind our camp the hardwood ridge fairly swarmed with the native game of the region. Red foxes hunted the grouse and the rabbits within a stone's throw of camp; bears tore open the dead logs and stumps in search of ants and their eggs. Weasels abounded in every brush heap, and the wary mink and stupid muskrat left their tracks and signs along the lake shore in the very edge of our yard. Ducks and loons and sheldrakes swam past our door, and eagles, ospreys, and herons were daily to be seen from the front porch.

We built a large feeding station for the birds, just outside our north window. This was kept supplied with oatmeal, suet, rice, and other bird delicacies. Canada jays, four varieties of woodpeckers, two kinds of chickadees, juncos, nuthatches, and other small birds swarmed to this woodland free-lunch counter, giving us many hours of enjoyment and affording a

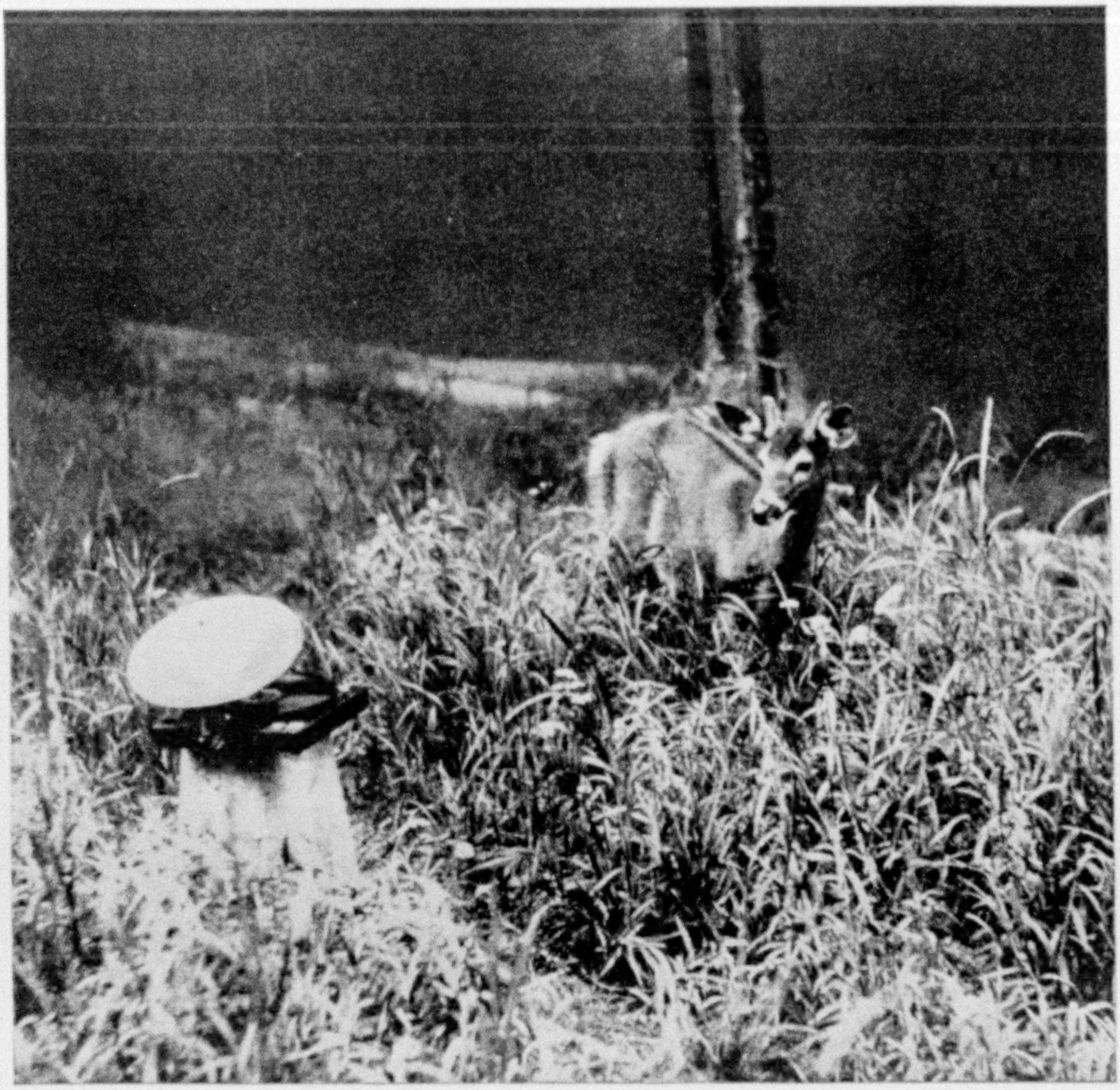


STARTLED BUT UNAFRAID

A white-tailed fawn enjoys a morning plunge. His color is dull rusty brown, marked with white spots, which will remain until he assumes his gray coat for the winter.

ALERT FOR DANGER

A white-tail's ears are wonderfully sensitive and catch any suspicious sound instantly. His curiosity, on the contrary, often leads him into danger. He will sometimes stare at a motionless enemy without alarm, but any movement sets him off with a crash and a bound.



MUSIC HATH CHARMS

A young buck investigates a portable phonograph. Though by instinct elusive and fleeting, deer become surprisingly tame and confident when not chased by dogs or fired on by hunters.

splendid opportunity for taking countless photographs at close range.

THE OBJECTIVES OF THE ADVENTURE

Our primary purpose in reverting to the primitive life was to gather magazine material. I had three definite objectives. The first, and most important, was to obtain some good pictures of a drumming ruffed grouse—something which has rarely been accomplished with any degree of success. The second was to obtain a large number of good white-tailed deer pictures, these to be used with a series of hunting stories on which I was then at work. The third was to find out exactly what it would cost two people of moderate tastes to live for a year in the Big Timber.

We were finally able to reach our goals in each of these three cases, as I will endeavor to prove. The first goal was the hardest. Our native ruffed grouse (*Bonasa umbellus*) is as wary a game bird as ever slipped behind a tree to avoid a charge of shot. When he sounds his mating call, the bird invariably selects for his "sending station" the heart of a dark thicket, where the light is generally poor from the viewpoint of an ambitious cameraman.

During the drumming period the old cock partridge appears to be aware of the fact that his enemies can hear fully as well as his intended mate. He is very much on the alert and will burst out of that thicket on thunderous wings at the first furtive snap of a twig.

FEAR MAKES HIM SIT UP AND TAKE NOTICE

When alarmed, the red squirrel places his front paws over his palpitating heart. This attitude belies the ferocity of the males in spring, when frequent death-struggles take place.

Moreover, given the best of conditions and being enabled to get within eight or ten feet of the bird while it is in the act of drumming, the cameraman must have a fast lens to admit sufficient light, and his shutter must permit of exposures of not less than 1/500th of a second if he hopes to stop the motion of the whirring wings—a difficult set of conditions, but not impossible.

THE RUFFED GROUSE DRUMS FOR HIS PORTRAIT

The camera which I used for this work was equipped with an ultra-rapid lens, f. 2:7, and a focal-plane shutter giving speeds up to and including 1/1000th of a second. This camera is of the reflex type and was a highly satisfactory instrument for the work at hand.

I located at least a dozen drum-logs before finding one that seemed to offer a chance for pictures. Most of them were in the very heart of some dense thicket, where there was little or no light for photographic purposes.

Six feet from the little worn place on the log where the bird was in the habit of standing, a blind was constructed by driving in two poles five feet apart and weaving cedar boughs and twigs in such a manner as to form a dense screen. A small hole, just large enough to admit the lens of my camera, was left in the center of

WINTER INCLOSES THE AUTHOR'S BASE CAMP

Here the temperature often sank to 40 degrees below zero; but the insulating properties of spruce and cedar helped keep the cabin warm. Its corners were squared, not notched.

THE RED SQUIRREL KEEPS BUSY ALL WINTER

In knotholes and hollows of trees, or in burrows under roots, stumps, brush heaps, or other covering, this diverting little fellow makes his nest. Handsome and interesting as he is, every lover of birds sternly condemns him, since his food includes the young and the eggs of warblers, vireos, thrushes, chickadees, and nuthatches.

this screen. When it was completed I added, as a final touch, a soft seat of fir tips, anticipating the long hours of waiting which were ahead of me.

The particular cock grouse that I was stalking habitually used his drum-log about the same hour each forenoon. The first time I saw him on the log he appeared suspicious of the newly erected blind, which he examined very intently. That morning I was unable to take any pictures, for the bird flew away almost immediately; but the next day he arrived on schedule time and appeared more reconciled to the strange wall of cedar. I was able to get a few good pictures of him strutting up and down on the log, but he still refused to drum (see illustration, page 512).

Fearing that he would leave the location altogether, I kept away from the blind myself for the ensuing two days.

On the fourth day, just as I settled comfortably into position behind the screen, the grouse whirred in and alighted almost within arm's-length of me. Immediately he crouched down on the log, his feathers closely drawn against his body and his neck pulled in, looking for all the world like a small brown knot, blending well with the rest of the surroundings. He held this pose for perhaps five minutes.

Then, far up the ridge, another grouse started drumming, the long roll of his rapidly beating wings sounding startlingly close. My bird now stirred, stood erect, and stretched his neck to its utmost length. His fan was flattened out on the log behind him; he scuffed his feet on the log as I have seen prize fighters do in the resin of the ring. The ruff on his neck distended until it appeared to be six inches in thickness; he held his wings rigidly down at his sides and gave three short, preliminary beats, using just the tips of his wings.

These first beats just escaped being noiseless. Then he lifted his wings to the horizontal position and the blur of motion was too fast for the eye to follow, while the woods resounded to the "long roll" of the drumming cock partridge. The wings travel through a very short arc—not more than five or six inches. They beat the air with such force that leaves and grasses six feet in front of the drum-log are flattened down by the blast of disturbed air.

So fascinated had I been in watching this performance that the camera, my real reason for being there, was forgotten. In a moment, however, the big grouse obligingly went through his performance again, and this time I got several pictures, varying the length of exposure and using the lens wide open to admit all the light that was available. Finally, the click of the shutter alarmed my strutting subject and he went away on roaring wings. But he returned the following day, and I used a dozen plates on him.

So we felt that Goal Number 1 was safely attained.

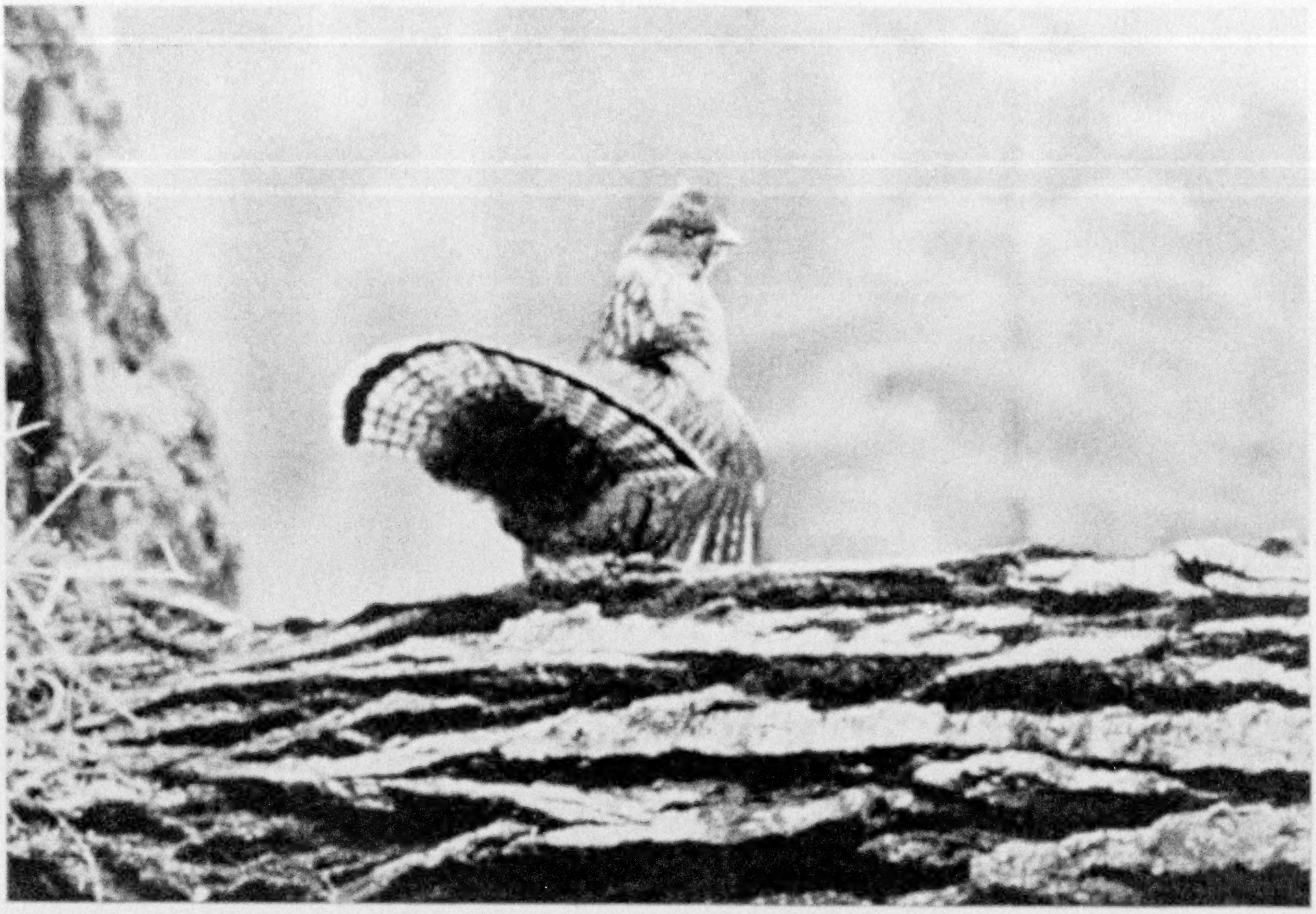
GUNFIRE FAILS TO FRIGHTEN DEER

Then we started after our deer pictures, and did not have far to go. The deer were everywhere, and we took pictures of them from the canoe as they fed along the shores of Umsaskis and Long Lake; more pictures as we happened to run into them while traveling the various trails near our camp, and still more at little wilderness ponds like Priestley.

It did not take us long to discover that there is a distinct technique to wild-life photography. We discovered, for example, that it is far easier to approach any wild thing openly than it is to try to steal furtively upon it. The deer appeared to enjoy being talked to in low tones. Frequently they would stand with their ears up and eyes wide and questioning until we were within 20 feet or less; then they would walk away, looking back at us with curiosity, but with few signs of real fear. If we attempted to creep up to them, invariably the first snapping twig sent them bounding to cover.

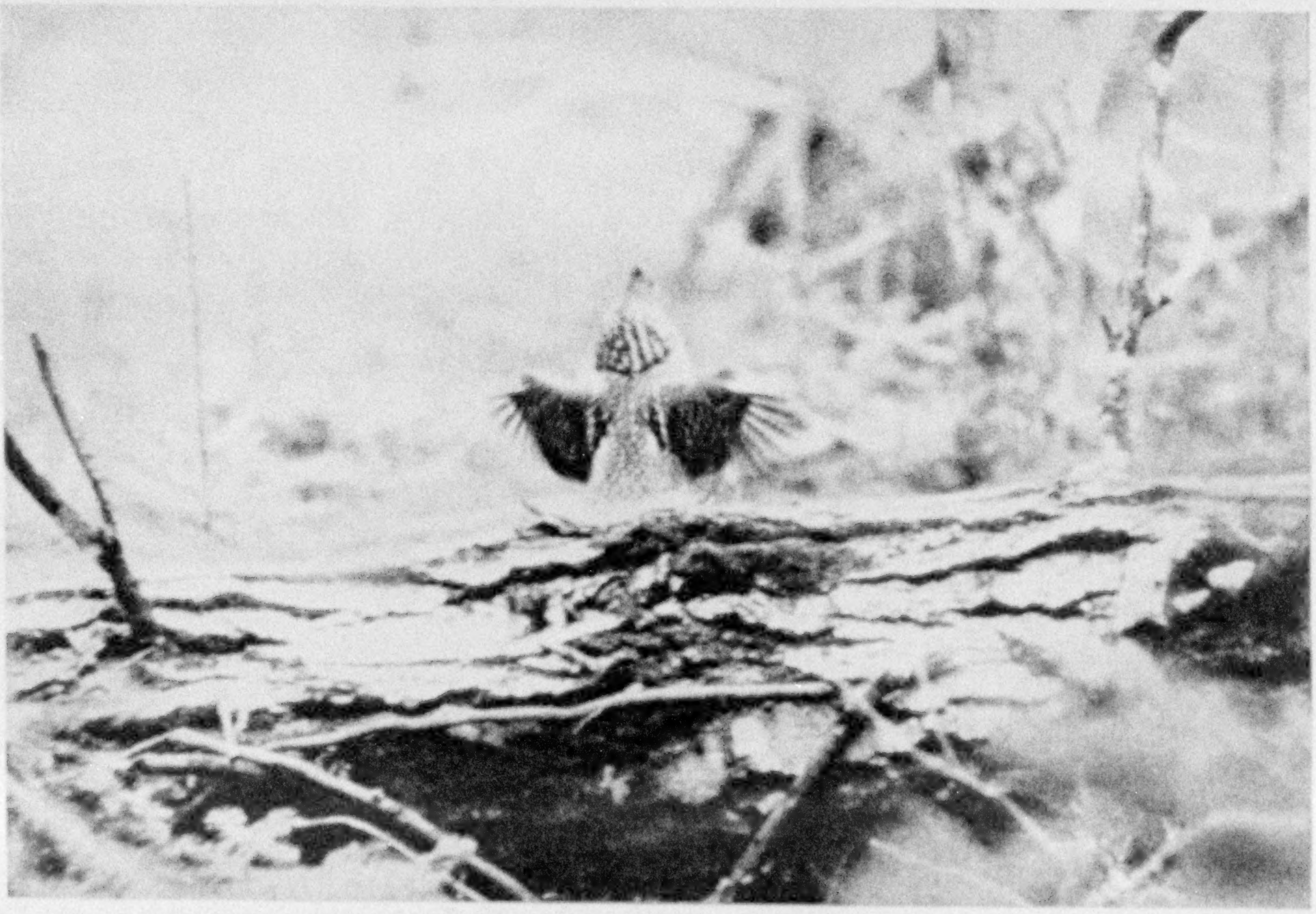
In our canoe we chased a 10-point buck out into the lake one forenoon and kept him circling until we had taken five pictures of him at close range. Then, after an admirable display of patience, he finally lost his temper and came straight for the canoe, shaking his antlers angrily and evincing every intention of upsetting us to pay for our impertinence. So we "gave her the ash," as the guides say when they are in a hurry to get somewhere in a canoe, and left the buck to his own devices.

Well, we had our deer pictures, all we needed of them, and so we reached Goal Number 2, although during the ensuing



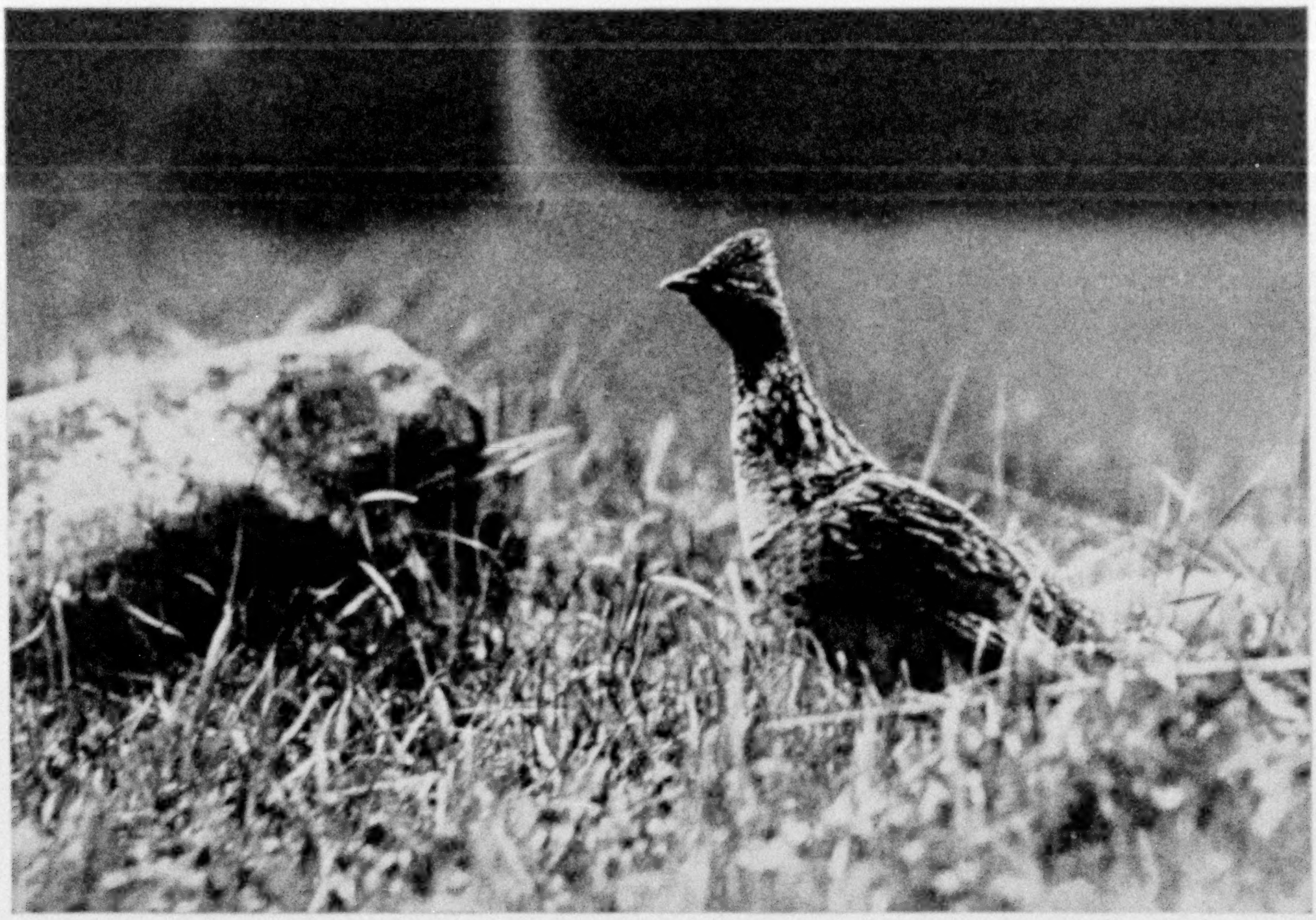
RUFFED GROUSE ON A DRUM-LOG

This fine fellow and his contemporaries survive in spite of hunters. The roll of his beating wings is a stirring sound each spring and fall, but the woodsmen who have seen him thus summoning his mate are few indeed.



A COCK GROUSE SOUNDING THE LONG ROLL

The author found the ruffed grouse a difficult subject for photography. Poor light was the rule wherever any of the birds elected to drum; so that, in addition to the ordinary problems involved, there was the necessity of using an ultra-rapid lens. A shutter speed of 1/500th of a second stopped the action of the wings (see text, page 509).



THE PRINCE OF AMERICAN GAME BIRDS AT CLOSE RANGE

The ruffed grouse possesses a vigorous constitution and a stock of wiles for evading hunter and dog; but much conservation work remains to be done if he is to be restored to covers which he once frequented.

winter we added to our collection while the deer were banded together in the "yards" (see text, page 514).

STORING FISH, FRUIT, AND PARTRIDGES FOR THE WINTER TABLE

During the fall we salted down a nice lot of trout and togue for use later on; gathered and canned quantities of raspberries and blueberries; bought a supply of vegetables from a lumber camp and stored them in our cellar; and put up quite a lot of partridge breasts by canning the delicious white meat in a thick broth. This is superior to any form of canned chicken.

In the latter part of the hunting season I shot a fat buck, which froze promptly when swung from our porch and supplied us with meat far into the winter.

We had 30 pounds of Canadian maple sugar and a couple of gallons of the delicious syrup; a barrel of pastry flour; strips of lean bacon; dried fruits of several sorts; canned goods in large variety; powdered milk and eggs; coffee, tea, and chocolate; crisco for our shortening needs; figs and dates and raisins in boxes; several kinds of cereals; peanut butter and several kinds of marmalade and jam.

When the lake finally froze over and travel became out of the question, we felt that we were fully equipped for a comfortable winter in spite of our remoteness from stores and other civilized appurtenances.

We ran our big stove full blast during the cold weather. A wood fire kept us comfortable through an entire Maine winter, although we had temperatures as low as 40 degrees below zero, accompanied by howling gales that frequently swept the snow flush with our eaves. At night we would lie in our warm bunks and hear great trees cracking with the penetrating cold, and the next morning our window-panes would be coated deep with white frost (see illustration, page 510).

FAWNS AND DOES LIVE IN WINTER VILLAGES

There were days, however, when the warm sun filtered down through the trees,

Photograph by R. G. Stubbs

FISHING BELOW ALLAGASH FALLS

Here the canoeist makes a carry of an eighth of a mile. Below, there is smooth going to St. Francis, a few miles northeast of the union of the Allagash and the St. John rivers.

the surface of the snow melting beneath its rays. On all such days we were accustomed to don snowshoes and cameras and go back over the ridges to investigate the life of the white-tails "yarding" in the big swamp half a mile from camp.

The "yards" are little deer villages with main trails and branch trails, these leading to the best browse and to springs which never freeze in the coldest of weather. The deer, we discovered, sleep huddled up for body warmth, underneath blowdowns, which partly shelter them from the cold blasts howling down from the north.

We found one yard which harbored probably 50 deer, mostly does and big fawns, for at this season of the year the bucks are shedding their antlers, and they are morose and irritable, herding by themselves and not moving around any more than necessary. We found a number of these shed horns, the bases still bloody from the shock that separated them from the buck's head. A healthy male deer sheds his antlers earlier than a sick or wounded one, and cases have been observed where a badly injured animal did not shed his horns until late the following spring.

When the horns drop off, the melting snows and the rain soften them somewhat, after which the squirrels, wood mice, and porcupines gnaw them for the scant nourishment they contain. This accounts for the fact that so few shed horns are found during the summer months, even in sections where deer are known to be plentiful.

Bobcat tracks were to be found in the vicinity of every deer yard. The big cats hunt in groups of from three to six or more, and we found plenty of evidence that they frequently pull down and kill small deer. A big buck, even after his horns are shed, would doubtless prove too powerful an antagonist for a group of bobcats to attack, unless he were hopelessly bogged down in deep snow. The bucks can strike wickedly with their front feet, these weapons being more effective even than the branching antlers.

Maine has enacted a law providing for payment by the State of a $10 bounty on bobcats, for they are the worst killers

IT IS NOT HARD TO BE COMFORTABLE IN THE WOODS IF ONE KNOWS HOW

The author and his wife set up this temporary camp in the midst of the Maine forest. It afforded them an excellent opportunity to study and photograph wild life without discomfort.

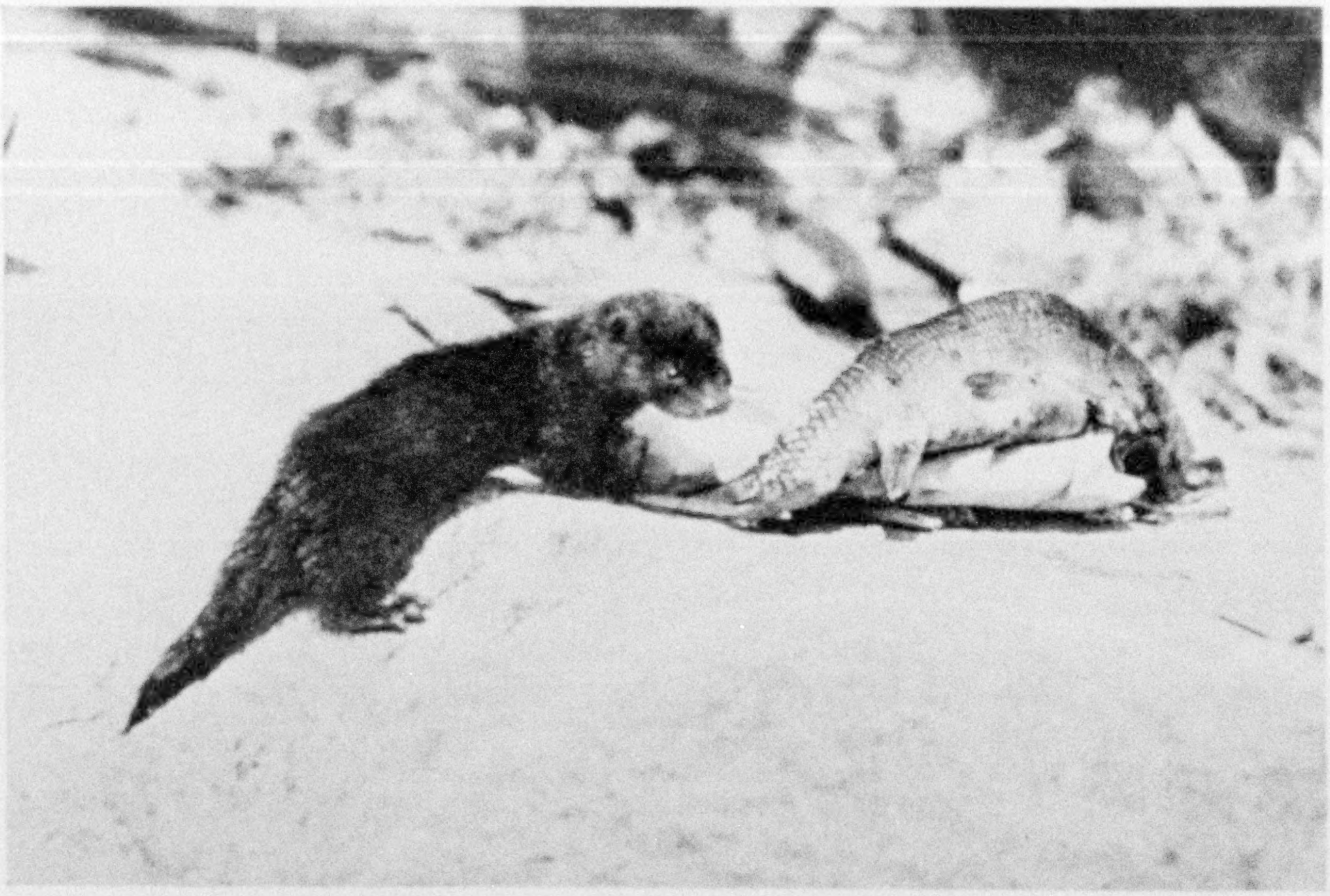
in this section of the United States. They are cowardly, however, and no man need fear attack from any group of bobcats. If it is possible for them to skulk away unobserved, they will do so. Cases have been reported in which a bobcat put up a savage fight when trapped or otherwise cornered. A rat will do the same thing.

We were fortunate in obtaining some excellent pictures of the deer during the winter months; also in collecting quite a bit of valuable data as to their methods of living through the severe winters of the northern part of Maine. They finally got so accustomed to seeing us in and about the yards that they would allow us to approach fairly close to them before taking alarm.

We found that there is no Maine animal so wild that a man cannot become acquainted with it, if he is willing to pay the price in time and patience. We got pictures of the wary mink, which is supposed to be as difficult to approach as any of our native creatures. We spent three weeks in getting acquainted with one family of these shy creatures, and finally were able to make both still and motion pictures of them taking bits of fish from our hands.

We believe, from our experiences with them, that if hunting could be absolutely prohibited for even a few years, the creatures that we now call wild would be almost as readily approachable as any domestic animal. Animals possess a sense which is not equally well developed in human beings. They can *feel* danger. We have seen too many instances of this for us to doubt the statement. They know when they are protected and can tell instantly when peril threatens them. Even the humble crow can distinguish between a gun and a walking stick. During the summer months, when hunting is against the law, the banks of the Allagash are fairly lined with feeding deer.

They pay little attention to the approach of a canoe that is being paddled, although the sound of a motor does alarm them (see page 505). A single rifle-shot generally causes a group of feeding deer to



A MINK'S HUNGER OVERCOMES HIS SHYNESS

Although one of the most difficult of all wild things to approach, the mink finds fish an irresistible lure. Among his other foods are mice, rats, chipmunks, squirrels, birds, birds' eggs, snakes, frogs, salamanders, insects, crustaceans, and mussels.

"PORKY" GOES IN SEARCH OF SALT

Seated truculently on the doorsill, this porcupine disputed right of entry with the cabin's owners. Presumably he was in search of salt when discovered, for these prickly denizens of the forest will gnaw through board walls or destroy oar handles, folding chairs, and other objects merely to get the salt that comes from contact with human hands.

A YOUNG MINK FEEDS FROM THE HAND

This little fellow and his brothers and sisters became so tame that Mr. Lee could lift them by their teeth at the end of a piece of fresh fish. They made friends with him during the ten days which he devoted to starring them in his wild-life motion pictures (see text, page 515).

raise their heads, but in a moment they resume their feeding if not otherwise alarmed—in the closed season.

But traverse the same region during the hunting season, and it is rare indeed to catch even a glimpse of a disappearing flag. The deer are back in the swamps, where they know that they are safe from molestation. In October and November the banks of the Allagash are as devoid of deer as those of any other river in this land.

BLACK BEARS ARE PLENTIFUL AND TROUBLESOME

A few years ago the Maine Legislature removed the bounty formerly paid on bear, and with this incentive gone few trappers waste much time on this animal. The pelt of the bear is not of sufficient value to offer any real inducement to the seeker after more valuable fur.

We saw seven or eight bears during our stay in the woods, and on our daily trips we continually found evidences of their work and presence. We found where they had ripped open rotting stumps and logs in search of ants and their eggs; found where they had flattened down the blueberry and raspberry patches in their quest for berries; and studied their tracks along the banks of the trout brooks and the main river.

One venturesome bruin even came into our camp yard during our absence and stole the spotted eggs from a song sparrow's nest in a bush beside the porch, much to my wife's disgust, for she had been planning to get pictures of the baby birds when they arrived. Bears frequently broke into the storehouses of the various lumber camps near us, and on such raids they showed a marked preference for pork, molasses, and sugar. It is the common custom of the country to fasten used sawblades across the nailed-up doors and windows of all storehouses to prevent the bears from gaining access to the provisions.

Bruin is a vegetarian in his normal state, subsisting for the most part on roots and berries, although he is not averse to

A SPLENDID ALLAGASH BUCK

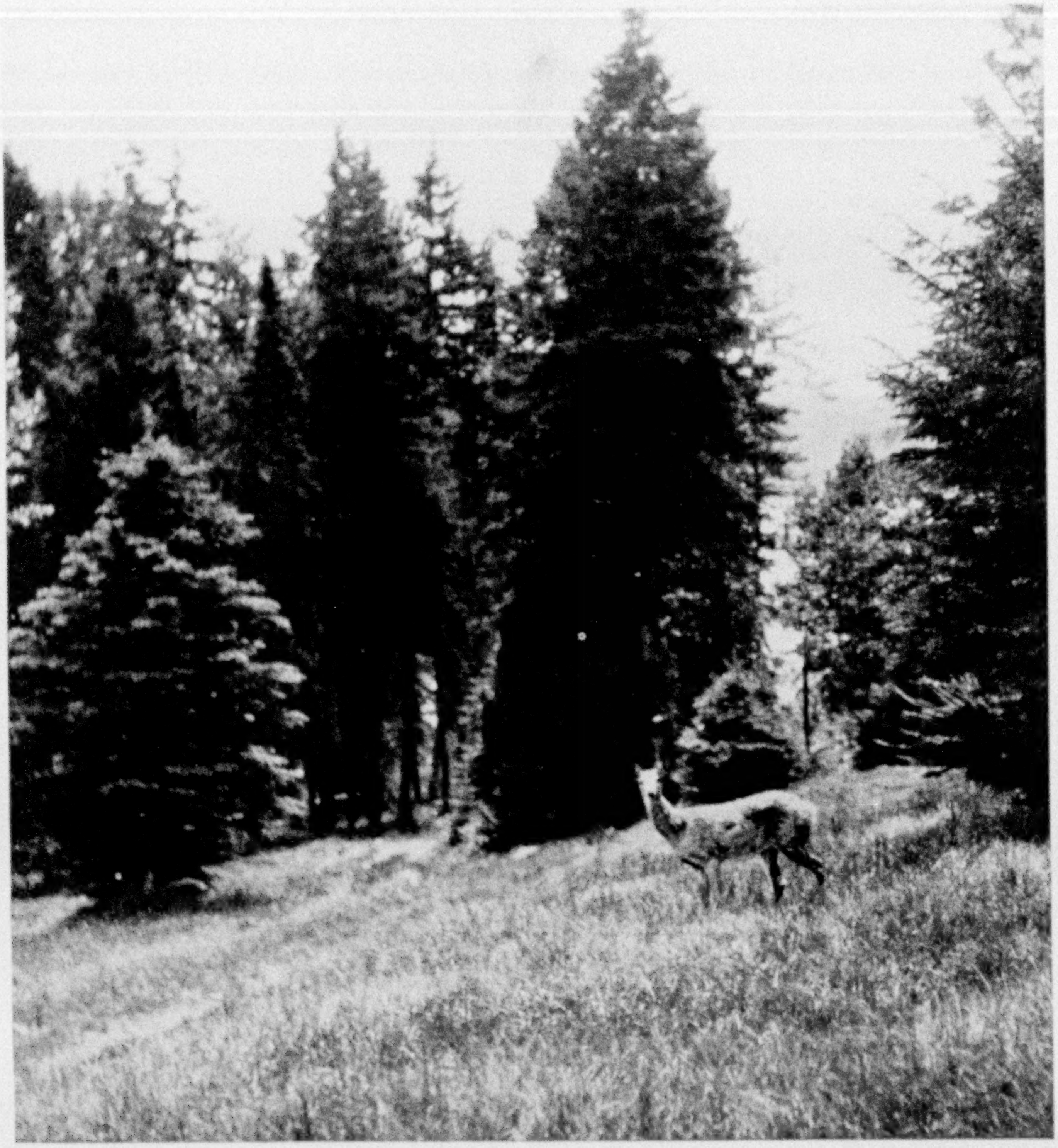
Hunters usually ascribe to the male a greater degree of wariness than that possessed by the doe. Nor is the buck credited with remarkable chivalry. The "head" which the author has caught with his camera is remarkably well formed.

sampling a dead horse or deer if he chances to run across such ready-made provender. He rarely kills his own meat, especially in a country such as the Allagash, where his natural food is to be found in abundance. At the time when such animals as the fox, bobcat, lynx, and fisher are hard put to it to kill sufficient game to keep them alive, the bear is comfortably sleeping the long sleep of hibernation beneath some dense brush heap or in the seclusion of a cave. During the long summer months he has food in plenty without the necessity for killing.

The great blue heron, which was protected for several years by a Federal provision, is fortunately increasing rapidly. Flocks of these picturesque and interesting birds are to be seen all along the river, and their presence evokes equally picturesque language from sportsmen who visit the country in search of trout and togue and who complain that the herons kill many game fish and waste many more that prove too large for them to lift after having been speared.

HI-JACKING EAGLES LET OSPREYS DO THE WORK

Bald eagles and ospreys wage their eternal warfare along the river, and frequently we were privileged to witness the



THE WHITE-TAILED DOE CHANGES HER COAT WITH THE SEASONS

This animal was photographed in May, when shedding her rough, gray winter coat for the summer red. In many instances protective laws surround the doe, while the buck is left to survive more largely by means of his own resources.

"hi-jacking" operations carried on by the eagles. So far as we could determine, these aërial bandits never caught any fish themselves, apparently being content to let the ospreys do all the work for them.

Both eagles and ospreys did their hunting in pairs, and whenever the smaller birds were to be seen circling high above the river, we usually saw a pair of eagles floating like twin specks at a higher level, keeping tabs on the fishing operations going on below them.

Hardly a day passed without bringing its share of unusual or interesting experiences. Among the Christmas presents sent us from home was a small vial of an expensive English perfume. Mrs. Lee was reading on the porch in front of the camp one forenoon when suddenly a male ruby-throated humming bird darted in and poised directly over her head, where it remained for several seconds before buzzing off.*

*See "Holidays with Humming Birds," by Margaret L. Bodine, in the NATIONAL GEOGRAPHIC MAGAZINE for June, 1928.

THE WEATHER PROPHET TAKES A LOOK AROUND

Though of practically no economic value, the widely distributed woodchuck, or "ground-hog," has become important in folklore, for it is said that if he can see his shadow on February 2, "Ground-Hog Day," there will be six weeks more of winter.

It was some time before we were able to puzzle out the cause for this novel visitation. Satisfied at length that we had arrived at the correct solution of the mystery, we put some of the perfume on a bit of cotton wool and suspended it from a branch near the porch. In less than five minutes a pair of humming birds located it and investigated it thoroughly, showing quite conclusively that scent is a factor in the humming bird's search for food.

THE COST OF THE ADVENTURE IN THE WOODS

As to our third objective, or goal. We kept careful track of our expenditures during the first twelve months of our sojourn in the Allagash, jotting down in a notebook the amounts and dates of all money spent for any purpose whatsoever. At the end of that time, what with a garden and wholesale prices on much of our prepared foods, we found that it had cost us a little less than $150 to live, outside of photographic materials and other things which did not enter into our woods life, such as taxes on city property, club dues, insurance, etc.

We had discovered that it is entirely possible for two adults to live well for an entire year on less than it would cost for the same couple to pass a month in the city, with the difference that food in the woods is of much superior quality.

When one eliminates such items as car fares, theater tickets, gasoline and oil, perpetual bills for new clothes, parties, and other things of allied nature, and gets down to actual necessities, it does not cost a great deal to live. Of course, no one wants to do without these things; in fact, one cannot dispense with them in town.

But we have arrived at the stage where we wonder whether or not people are any happier surrounded with everything that modern science has provided, but deprived of the wonderful natural advantages already provided by Mother Nature.

WHEN A DROUGHT BLIGHTS AFRICA

Hippos and Elephants Are Driven Insane by Suffering, In the Lorian Swamp, Kenya Colony

By Capt. A. T. Curle

Of the King's African Rifles

With Illustrations from Photographs by the Author

FEW can realize what a drought means in some parts of tropical Africa, where all life, animal and vegetable, is to a great extent dependent on the regularity of the rains. Twice, in the course of patrol duty last year in the northern frontier province of Kenya Colony, I visited the Lorian Swamp, an area 60 or 70 miles in circumference during the wet season. On the first occasion, in February, the swamp was in its normal state, but on my second visit, in June, a drought had caused an altogether abnormal state of affairs.

The Lorian Swamp marks the termination of a river, the Engare Uaso Nyiro, which enters it by a canallike channel; then degenerates into a disconnected line of pools and a sea of mud.

The whole area is usually covered with grass growing to a height of 10 feet, which conceals a network of elephant and game tracks. If one penetrates into the grass the air becomes alive with clouds of mosquitoes.

Elephant, buffalo, hippopotamus, rhinoceros, and water buck are usually to be found in the swamp, while around the edge oryx, zebra, gerenuk, and Grant's gazelle abound.

A HIPPO GOES INSANE

Because of the failure of the spring rains, the Uaso Nyiro ceased to flow, and consequently the swamp began to dry up, leaving a few pools of mud here and there in the river bed. Into these pools crowded millions of fish, and soon these—alive, dead, and decomposing—were massed together, completely screening the surface of the water. Some 30 hippopotamuses tried hard to keep under the mud, but with indifferent success.

One hippo had a large open wound the size of a soup plate on his flank. This poor beast, evidently driven frantic by the starving fish, which nibbled at his sore, elected to live on dry land in a thick clump of bushes (see illustration, page 522). Finally, driven insane by suffering, one night he traveled two miles from the pool and was found in the village of a sheik, where, after having caused a panic, he was speared to death.

The swamp was visited daily by herds of elephants searching for water. They mingled unconcernedly with the sheep and goats grazing in the vicinity. One small elephant, while trying to drink, fell down a hole 10 feet deep which had been dug in the dried-up bed by natives in quest of water. Because of the bulk of the beast, it was impossible to rescue him, and there he had to die. Some of the elephants, maddened by thirst, became a menace to life. I actually saw a goat being prodded to death by one elephant and several children were killed while herding goats. One night an elephant attacked a camel within 100 yards of my camp and prodded the helpless creature to death with its tusks, meanwhile emitting fearful roars.

The masses of putrefying fish and corpses of elephants and a hippo we had shot combined to outdo any wartime gas attack in the strength of the aroma.

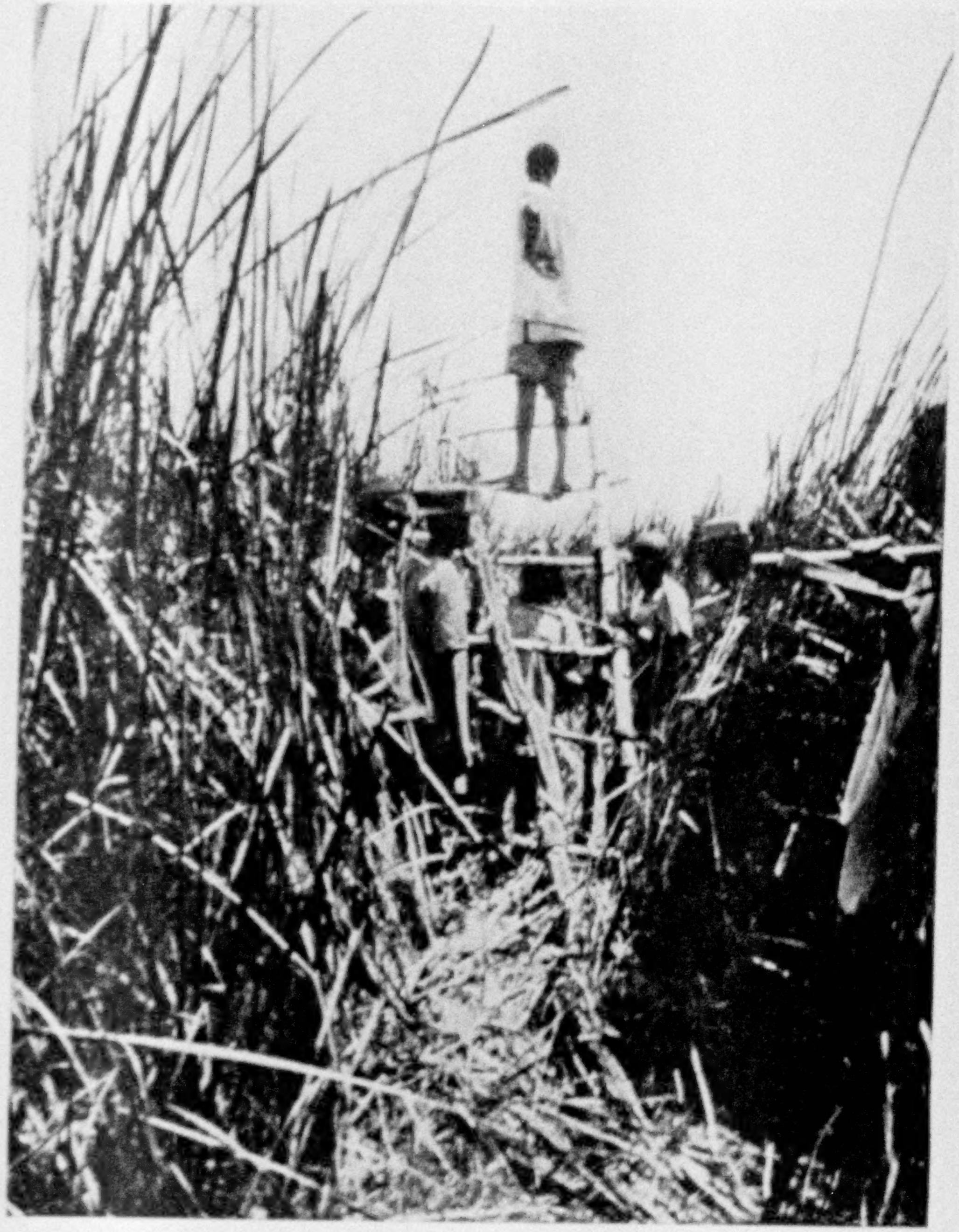
It became our daily recreation to watch from an anthill the herds of elephants as they prowled about the swamp. We must have seen hundreds during our fortnight in the neighborhood, but not once did we see a large tusker.

ELEPHANTS ARE HUNTED FROM LADDERS

Elephant hunting within the swamp is almost impossible under normal conditions, on account of the soft ground and high grass. The usual method is to camp in the vicinity and every morning examine the edge of the swamp for the spoor of

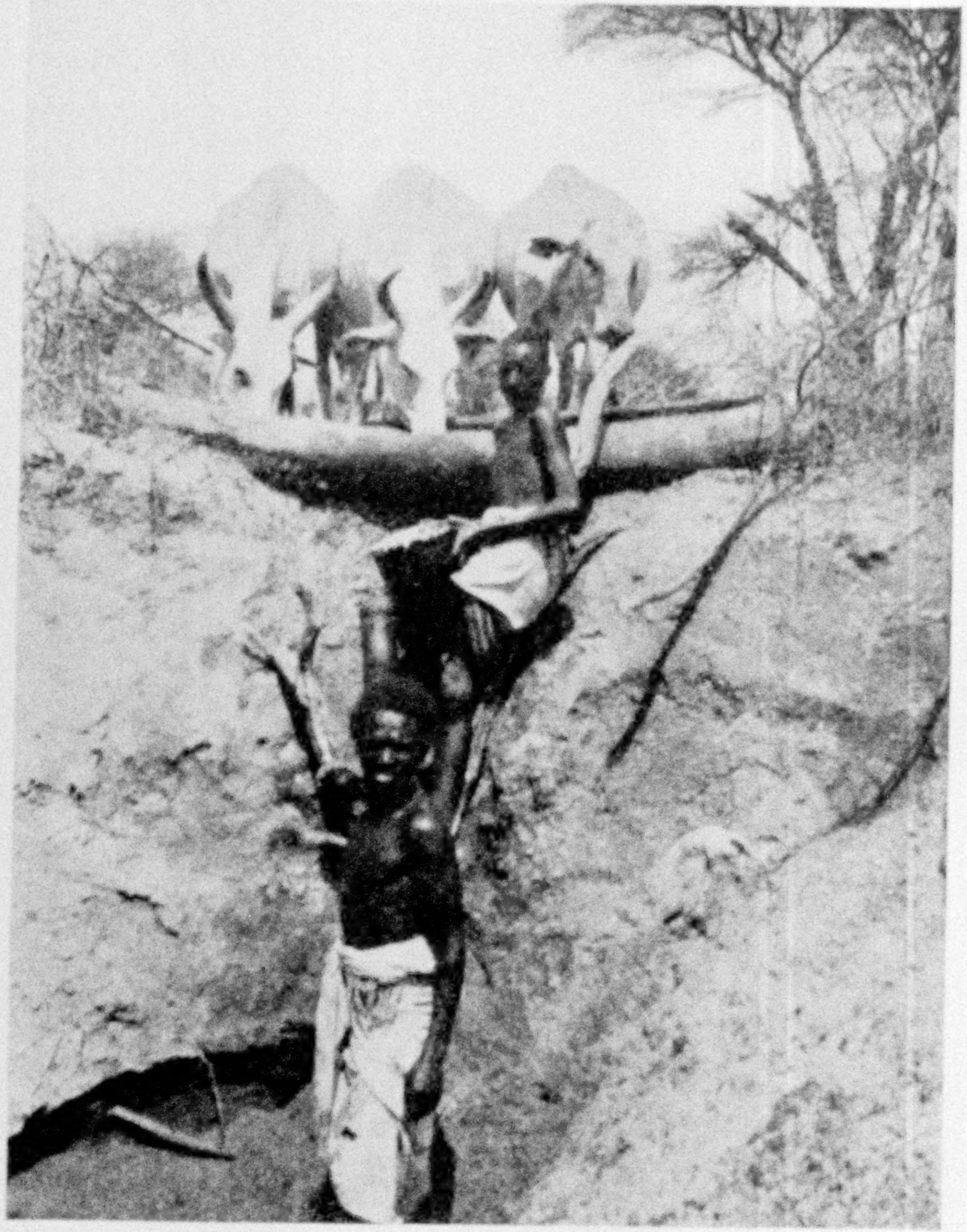
TORTURED WITH HEAT AND FLIES, A "RIVER HORSE" SEEKS RELIEF FROM THE WITHERING AFRICAN SUN

NEARLY CRAZED WITH HEAT, HIPPOPOTAMUSES CROWD INTO ONE OF THE LAST REMAINING MUDHOLES OF THE ENGARE UASO NYIRO, IN THE LORIAN SWAMP



THE GENTLEMAN UP THE LADDER LOOKS FOR ELEPHANTS

Ten-foot grass covers much of the Lorian Swamp except when rain fails. Usually this area is a maze of animal trails, which, however, can be observed to advantage only from an elevation.



BUCKET BRIGADES WATER THE STOCK IN TIME OF DROUGHT

Ten feet below the bed of the Engare Uaso Nyiro these natives of Kenya Colony find water for their stock. A thirsting elephant fell into one such pit and died there of starvation (see text, page 521).

THE HIPPOPOTAMUSES ARE NOT EATING THE FISH, BUT ARE SEEKING RELIEF FROM HEAT IN A MUDHOLE WHERE THOUSANDS OF FISH ALSO SEEK REFUGE AS THE SWAMP DRIES UP

HE BROUGHT FAITH TO THE AID OF HUSBANDRY

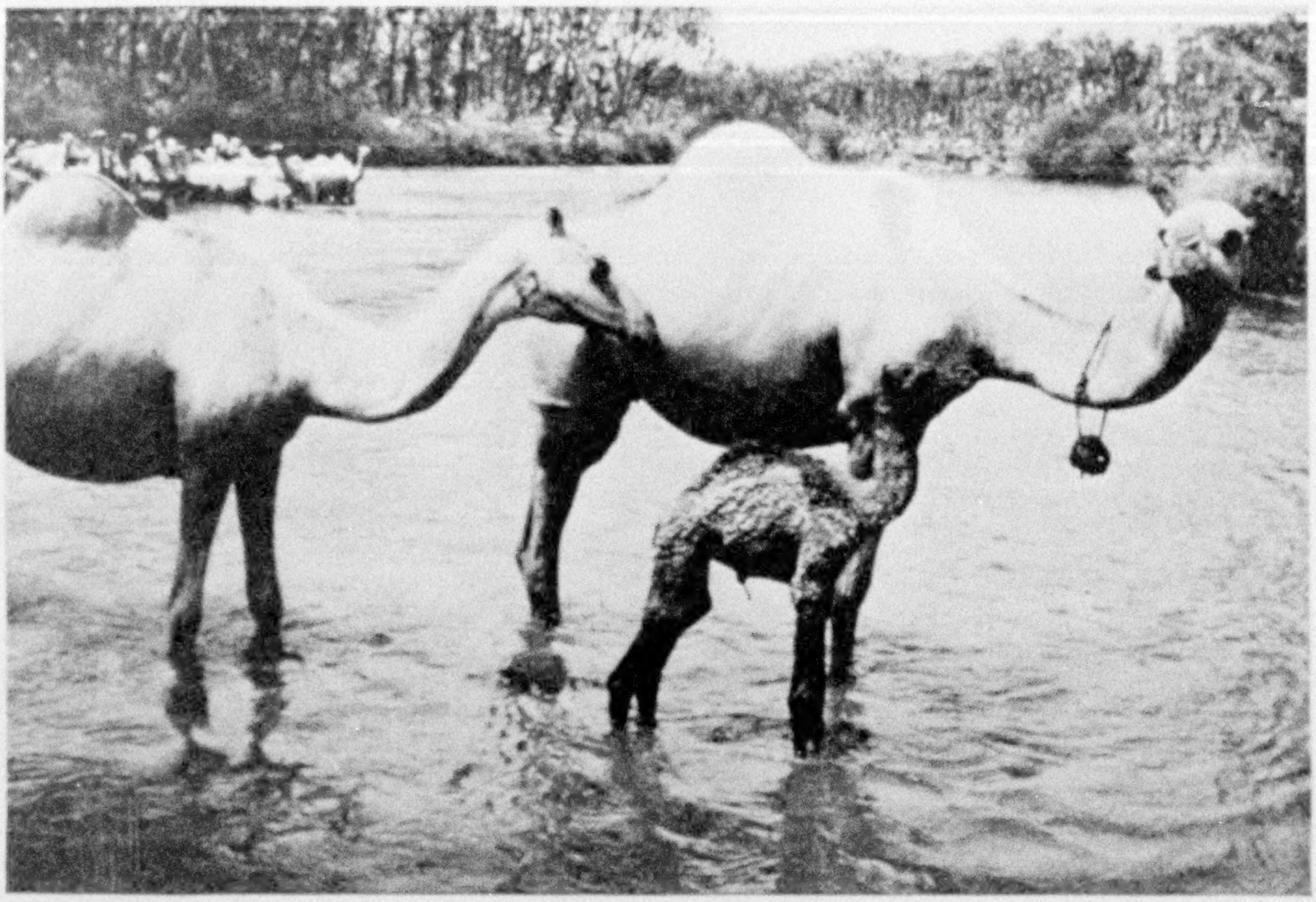
As the Lorian Swamp dried up, this man invoked the power of prayer against the drought. He imprisoned seven of his followers to pray continuously until rain should fall (see text, page 528).

WATER IS A PRECIOUS COMMODITY HERE

In parts of Kenya Colony even the human family sometimes finds life hard to sustain. These women are carrying water from the Engare Uaso Nyiro to their home, more than a mile away.

RIPPLES OF DRYING MUD IN THE BED OF THE ENGARE UASO NYIRO

Traps like this, dismal proof of rainless months in Kenya Colony, explain the doom of some of the prehistoric animals whose fossil remains are found to-day.



NEITHER NIGHT NOR FEAR KEEPS CAMELS FROM WATER

With bright lights to scare back marauding elephants and hippopotamuses, the author's military patrol conducted 100 camels safely through the drought-cursed Lorian Swamp at night. The nauseous odor of decomposing fish and animals filled the air.

any large individual which has been watering during the night and gone back into the thick bush country by day. Such tracks are followed until the animal is overtaken.

If this method fails, the hunter makes a ladder of thorn trees and enters the swamp. From the elevation thus provided the elephants are located. If an elephant should charge while the hunter is up the ladder, escape would be impossible (p. 524). The largest recorded tusks from the Lorian region are a pair weighing 160 pounds each.

The only man who lives permanently in the vicinity of the Lorian Swamp is a Mohammedan sheik, who is a keen agriculturist. He started a small *shamba* (garden) on the edge of the swamp, and all went well until the drought occurred; then herds of marauding elephants soon made short work of the vegetables. The sheik, regarding the drought as bad luck, locked seven of his disciples in a hut to pray day and night for rain. Food was handed in to them. They were confined six weeks, and still their prayers were not answered. What their ultimate fate was I never learned, but they may be still at prayer! (See page 526.)

As civilization advances into the province, the Lorian Swamp will doubtless become a great center for the production of cotton.

The hippopotamus is not, as one might think from the accompanying illustrations, a fish-eating animal. He lives in the water by day and ventures out by night to graze on shrubs, always traveling along deep-worn tracks to and from the water; he is dangerous only if one gets on his path between him and the water. Natives claim that they can call the animals from the bottom of a pool to the surface by whistling to them, but I once spent more than an hour on the bank of the Juba River while my soldier orderly blew and whistled till he was dry, all without result.

Having completed its task, our patrol crossed the middle of the swamp by night, escorting a hundred camels without mishap, but with the expenditure of many bright lights to scare off marauding elephants and hippos.

Real Vegetable Soup

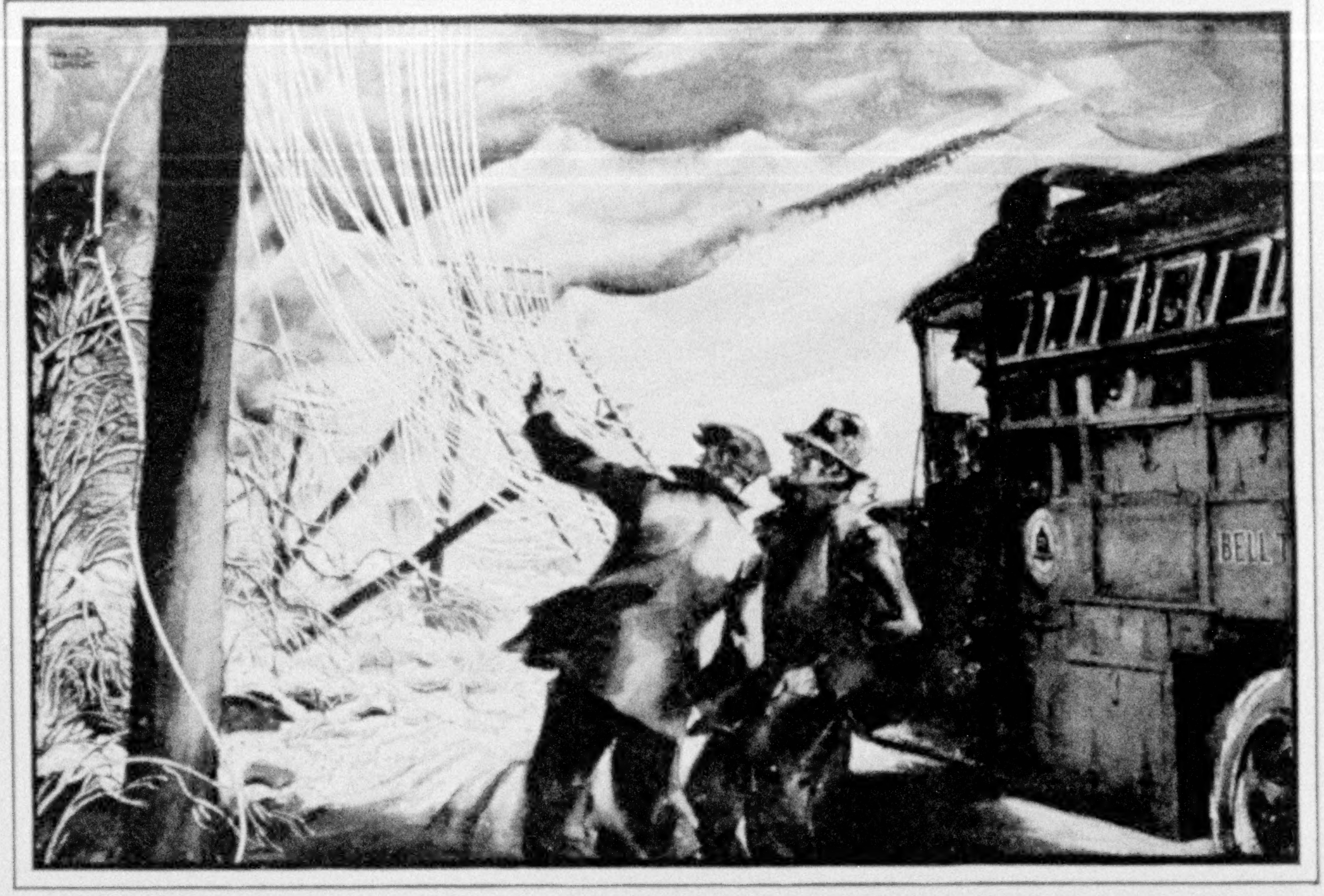
—a luncheon favorite!

A one-dish luncheon is more than a convenience—it's a real enjoyment—when Campbell's Vegetable Soup is your meal. Its 15 delicious vegetables satisfy the appetite and provide the most healthful midday invigoration.

Already cooked, this tempting and substantial soup sustains and nourishes without giving you the feeling of having over-eaten. On many a busy day, you'll find it the ideal answer to your troublesome luncheon problem. 12 cents a can.

LOOK FOR THE RED-AND-WHITE LABEL

AS A MEAL OR WITH THE MEAL SOUP BELONGS IN THE DAILY DIET



Suddenly, out of a spring sky . . .

An Advertisement of the
American Telephone and Telegraph Company

ALL was well on the telephone front on April 27, 1928. Suddenly, out of a spring sky, rain began to fall over central Pennsylvania. As night came on this turned into a furious storm of sleet, snow and wind. Inside of 48 hours, 3700 telephone poles were down. Seven thousand miles of wire tangled wreckage. Thirty-nine exchanges isolated. Eleven thousand telephones silent.

Repair crews were instantly mobilized and sent to the scene. From Philadelphia 47 crews came. Other parts of Pennsylvania sent 13. New Jersey, 6. New York, 4. Ohio, 6. Maryland and West Virginia, 12. In record time, 1000 men were stringing insulated wire and temporary cables along the highways, on fences and on the ground.

Within 72 hours the isolated exchanges were connected and the 11,000 telephones back in service. Then, while the temporary construction carried on, neighboring Bell System warehouses poured out all needed equipment, new poles were set, new crossarms placed and new wire and cable run.

In any crisis there are no state lines in the Bell System. In all emergencies of flood or storm, as well as in the daily tasks of extending and maintaining the nation-wide network, is seen the wisdom of One Policy, One System, Universal Service.

Better and better telephone service at the lowest cost is the goal of the Bell System. Present improvements constantly going into effect are but the foundation for the greater service of the future.

"THE TELEPHONE BOOKS ARE THE DIRECTORY OF THE NATION"

Your time is limited

but you can invest quickly, wisely, this way

The busy man willingly pays extra for the hours which the "Limited" saves him between New York and Chicago. In the rush of modern life the pressure of things to be done makes us quick to take advantage of the time-and-worry-saving conveniences which now extend into nearly every human activity — even to the making of investments. No longer is it necessary for you to make a prolonged personal study of your investment problem — simplify things by picking out one or two widely-known investment houses and rely on their experienced advice. At the nearest National City Company branch office you will find an investment advisor with our world-wide knowledge at his command ready to give you immediate time-and-worry-saving help in selecting from our broad lists of investigated securities.

The National City Company

National City Bank Building, New York

OFFICES IN 50 AMERICAN CITIES, INTERCONNECTED BY 11,000 MILES OF PRIVATE WIRES, INTERNATIONAL BRANCHES AND CONNECTIONS

. . . and so to bed . . . late . . . too much supper . . . wish I could get to sleep . . . bad dreams . . . business worries . . . dog barks . . . baby cries . . . time to get up . . . jangled nerves . . . irritable skin.

—*then* is the time your skin needs the comfort of a fresh Gillette Blade

THE NEW FIFTY-BOX
Fifty fresh double-edged Gillette Blades (10 Packets of fives) in a colorful chest that will serve you afterward as a sturdy button box, cigarette box or jewel case... Ideal as a gift, too. Five dollars at your dealer's.

THERE are mornings when a fresh Gillette Blade is better than any pick-me-up you can name.

And there are mornings when your beard is as tough and blue as your state of mind; when the hot water faucet runs cold and your shaving cream is down to the last squeeze and you scarcely have time to lather anyway; mornings when all the cards seem stacked against your Gillette. But slip in a fresh blade. Enjoy the same smooth, clean shave that you get on the finest morning.

You have to go through the Gillette factory to understand how it's possible to pack so much dependable shaving comfort into a razor blade.

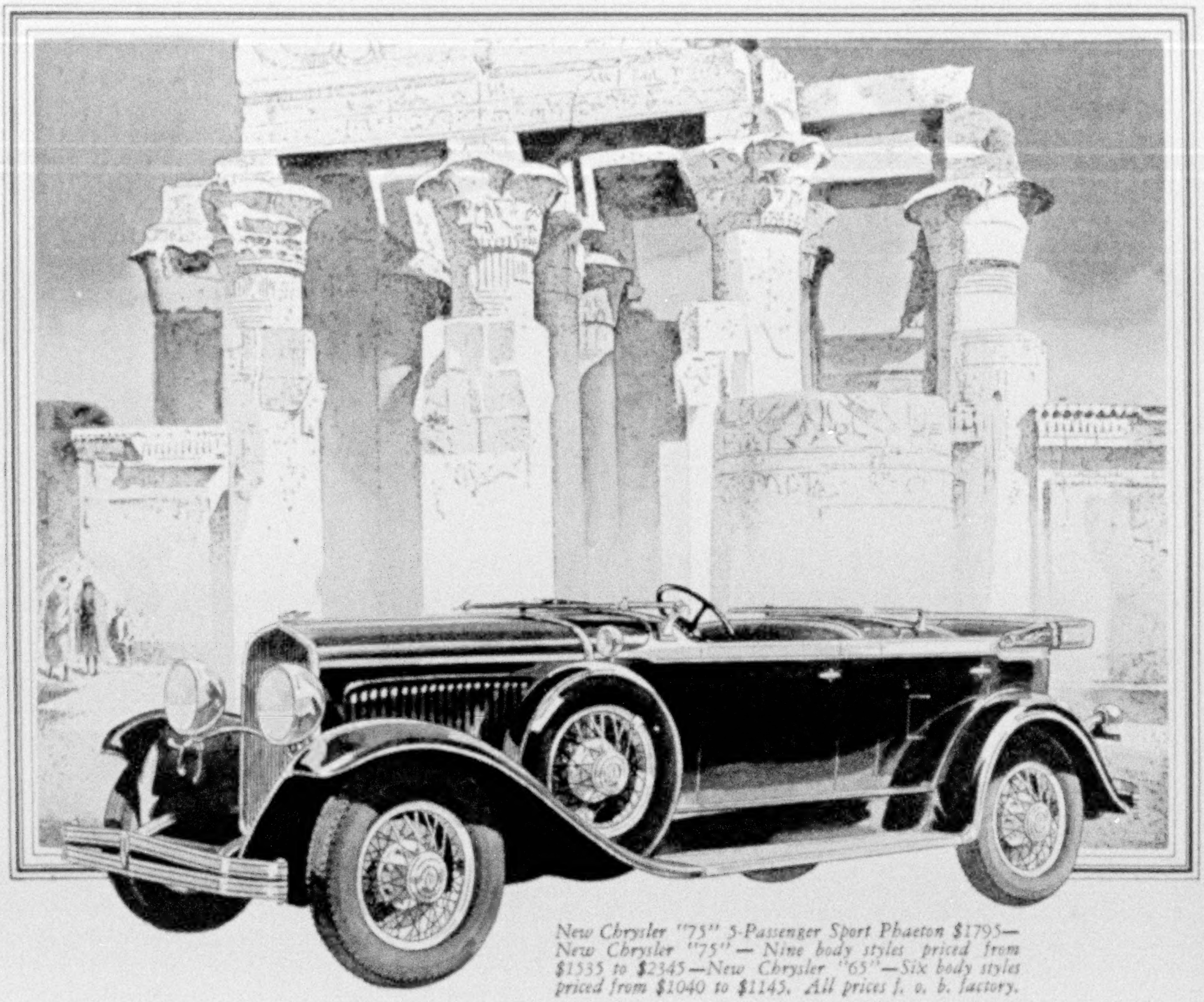
There you see some $12,000,000 worth of machinery invented and improved continuously for twenty-five years for just one purpose: to make the Gillette Blade—*every* Gillette Blade—do its smooth, expert job *every* morning for the thirty million Americans who count on it.

There you see in operation the unique system which makes four out of nine Gillette blade department workers inspectors—paid a bonus for every defective blade they discard.

At least a dozen varying conditions affect the comfort of your shave. But the Gillette Blade doesn't change. It is the *one* constant factor in your daily shave. Gillette Safety Razor Co., Boston, U. S. A.

★ ★ ★ **Gillette**

A CHRYSLER MOTORS PRODUCT



New Chrysler "75" 5-Passenger Sport Phaeton $1795—New Chrysler "75"—Nine body styles priced from $1535 to $2345—New Chrysler "65"—Six body styles priced from $1040 to $1145. All prices f. o. b. factory.

CHRYSLER *Leads Not Alone in Style But in Safety, Ease of Handling and Value*

Chrysler beauty—no chance creation—but tracing from the origins of classic art, as applied by Chrysler to the modern motor car—is universally conceded to be the most striking new thing in automobile design the world has seen.

This new Chrysler smartness and obvious style authority thus attained have done much to make Chrysler cars so attractive.

Chrysler cars have not only this striking new style that re-styles all motor cars but a superior ease and safety of performance and handling which makes Chrysler cars in any phase of operation trouble-free and dependable.

Because of this leadership in style, safety, performance and value, Chrysler motor cars are today inevitably in demand by people everywhere. Chrysler invites your closest inspection and severest test.

You'll get more from your car if I'm in the tank

Ethyl

The reason is simple.. HIGH COMPRESSION

DO you know *why* your automobile engine "knocks" and grows sluggish? The answer is important to you as a car owner.

Power increases as compression is raised. But ordinary gasoline can be compressed only so far. After that it explodes too rapidly, with the result that instead of more power you get "knocking" and power loss.

That is why General Motors Research Laboratories sought something which when added to gasoline would eliminate this inherent fault and make possible the advantages of higher compression.

The result was Ethyl fluid — the anti-knock ingredient which leading oil companies are adding to their good gasoline to form *Ethyl Gasoline*.

National distribution of Ethyl has enabled the motor industry, during the past two years, to offer new models with engines of higher compression and greatly increased performance.

"But what," you may ask, "of the millions of cars of average compression?" To them Ethyl Gasoline means high compression performance as carbon automatically raises compression by decreasing the size of the combustion chamber.

Whatever the make or age of your car, Ethyl will give you a performance beyond that enjoyed with ordinary gasoline. Ride with Ethyl today.

ETHYL GASOLINE CORPORATION — 25 Broadway, N. Y. — 56 Church St., Toronto — 36 Queen Anne's Gate, London

ETHYL GASOLINE

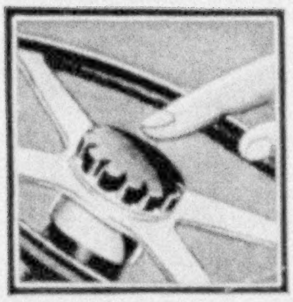
© E. G. C., 1929

Knocks out that "knock"

The **MOST BEAUTIFUL, LOW-PRICED**

WILLYS KNIGHT

THE LARGEST, MOST POWERFUL KNIGHT-ENGINED CAR EVER OFFERED AT SO LITTLE COST



"FINGER-TIP CONTROL"

A single button, in the center of the steering wheel, starts the motor, operates the lights and sounds the horn.

THE modern design and exceptional beauty of the new style Willys-Knight Six distinguish this as the outstanding creation of the country's leading style specialists. Only among the costliest custom built cars can you find adequate comparison with the artistry of finish and perfection of appointment which characterize this inexpensive automobile. There are thousands who have always desired a Knight-motored car but until now have been restrained by the necessarily higher cost of the *patented* double sleeve-valve engine. By them, this new Six is welcomed as history's finest Willys-Knight value.

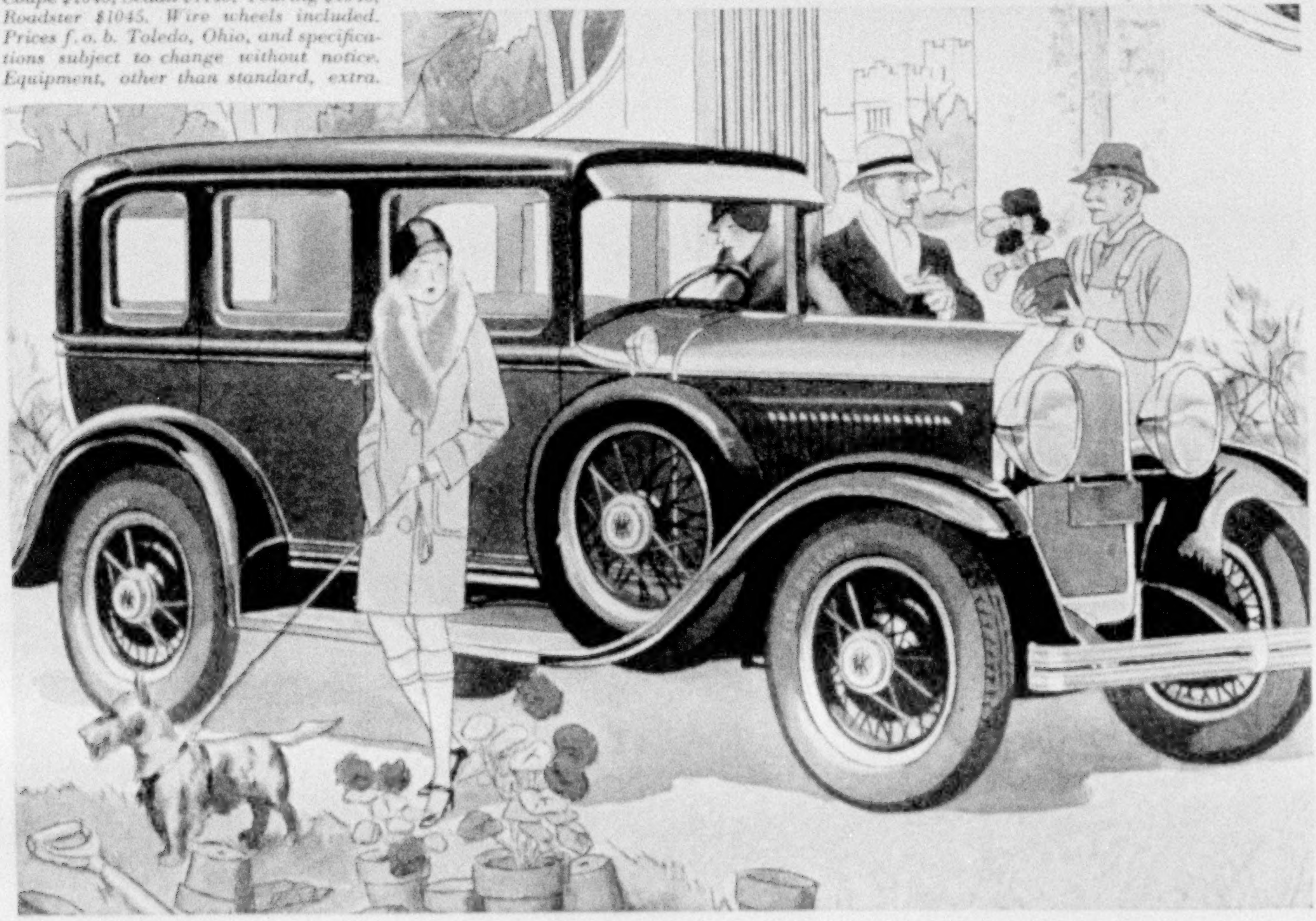
WILLYS-OVERLAND, INC., TOLEDO, OHIO

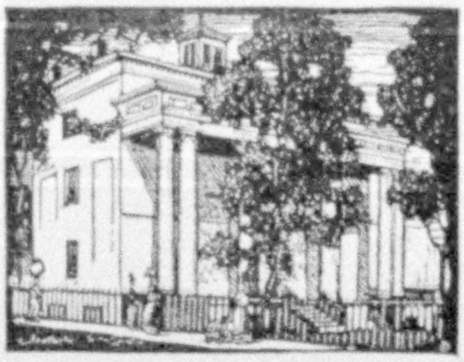
Willys-Overland Sales Co., Ltd., Toronto, Canada

COACH

$1045

Coupe $1045; Sedan $1145; Touring $1045; Roadster $1045. Wire wheels included. Prices f.o.b. Toledo, Ohio, and specifications subject to change without notice. Equipment, other than standard, extra.





This is your Official Welcome to Virginia and is dedicated to the purpose of urging you to heed the call—and come.

VIRGINIA INVITES YOU

VIRGINIA IS PERHAPS LOVELIEST IN SPRING. WRITE FOR YOUR COPY OF BOOKLET AND MAP NOW.

LIKE a good hostess, Virginia has prepared her house to receive you. Thousands of miles of good roads now beribbon the State, running from border to border and from the mountains to the sea. *Your way will be comfortable and easy.*

Virginia has placed thousands of Historic Markers along these highways. *Your way will be interesting.*

A booklet of forty pages has been prepared fully illustrating the amazing number of interesting and beautiful places in the State. A map has been prepared showing where these places are located. This map also outlines motor trips of various lengths of from one day to two weeks. *You can plan your trip to the best advantage.*

The booklet has been appropriately called "Virginia, the Beckoning Land." It, together with the map, will gladly be sent FREE to all who request it.

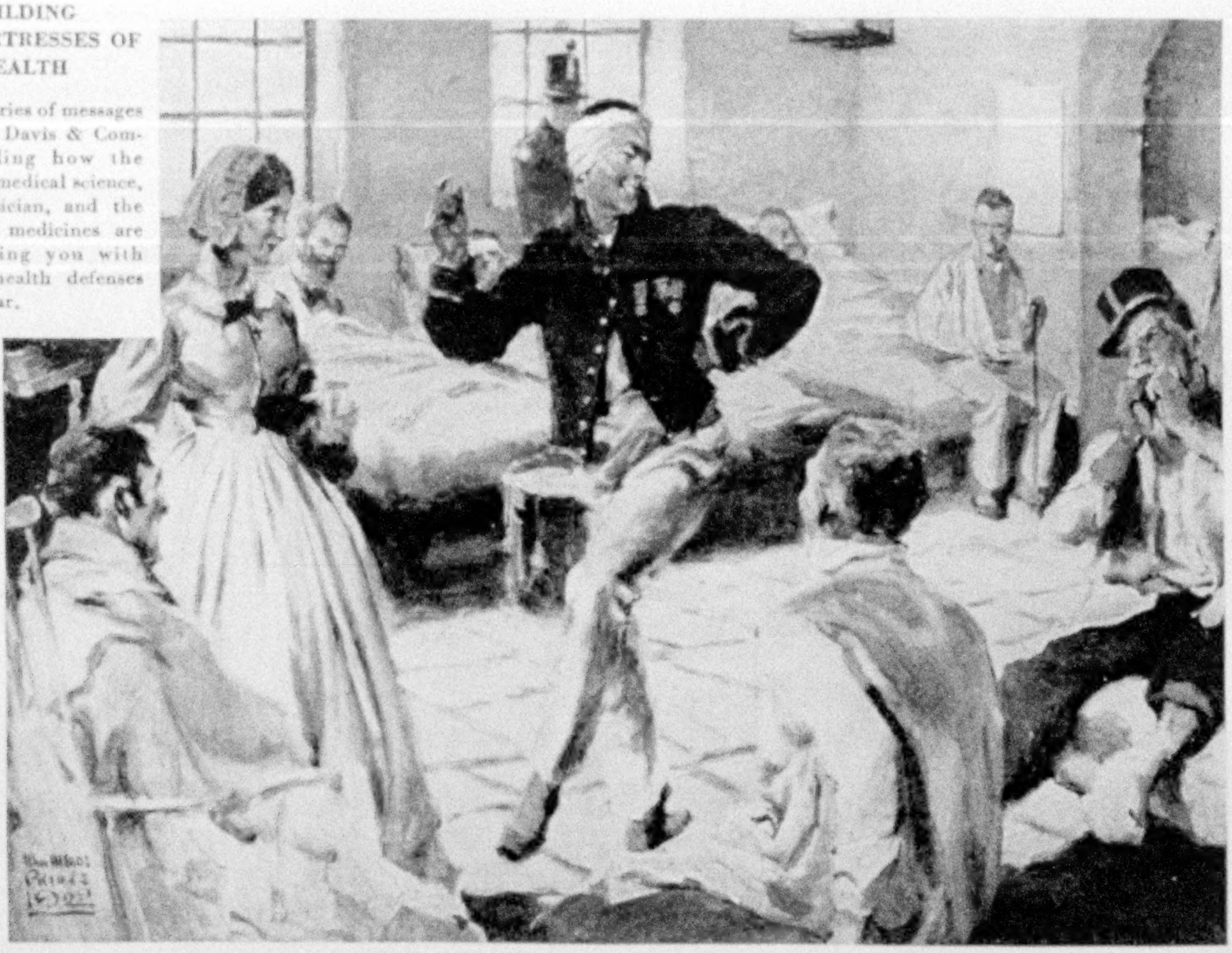
VirginiA
"THE BECKONING LAND"

STATE COMMISSION ON CONSERVATION *and* DEVELOPMENT

Room 138, State Office Building - - Richmond, Virginia

BUILDING
THE FORTRESSES OF
HEALTH

One of a series of messages by Parke, Davis & Company, telling how the worker in medical science, your physician, and the maker of medicines are surrounding you with stronger health defenses year by year.



A new spirit entered the Scutari hospitals with the coming of Florence Nightingale

"500 more wounded— no blankets or bandages!"

The beginning of trained nursing

"We have 4 miles of beds, not 18 inches apart," wrote Florence Nightingale from the base hospitals of the Crimean War in 1855. "Tomorrow 500 more wounded men are due, and no blankets, sheets, or bandages!"

Before many weeks this resolute, grey-eyed girl and her little band of volunteers—the first modern trained nurses—had brought order out of chaos. Recoveries among sick and wounded soldiers rose steadily from *fifty-eight* to *ninety-seven* out of every hundred!

In the World War of 1914-1918 desperate calls for "More nurses!" brought increasing thousands of women into scenes of horror and suffering. And their heroism is a vivid memory to the men whose lives they helped to save.

Today in the United States alone a quarter of a million registered nurses stand ready night and day to respond to physicians' need for expert care of the sick.

The nurse's professional attitude is impersonal, scientific. Yet her hand smooths the pillow under childish curls, or curtains the light from feverish eyes with a sympathy only a woman can give.

In the scientific training of nurses, there is never-ending insistence upon absolute accuracy in the administering of medicines prescribed by the physician.

It has been the privilege of Parke, Davis & Company to produce dependable medicines ever since 1886—medicines prepared according to highest standards of scientific purity and accuracy.

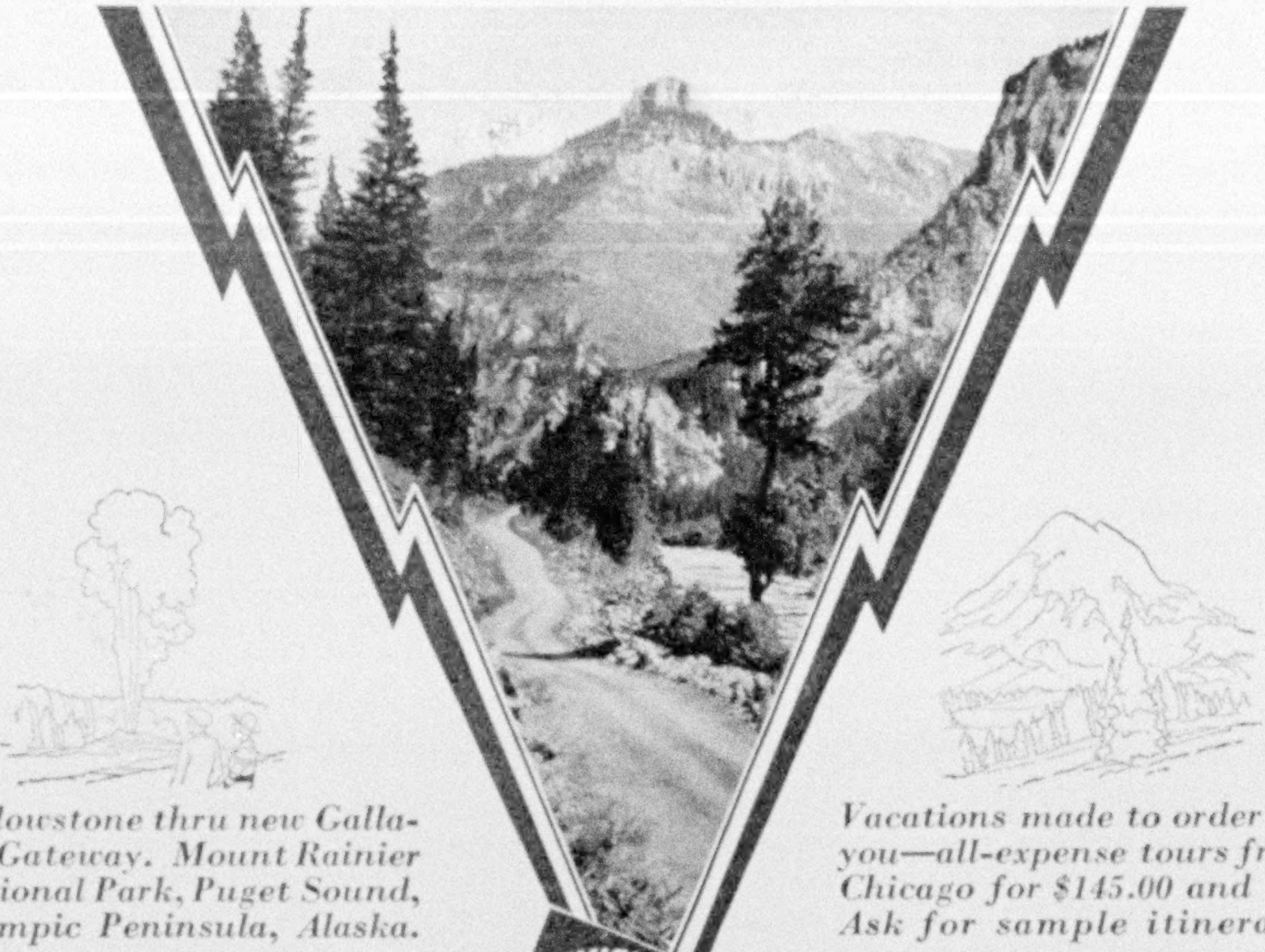
Brim full of Sunshine!

Each teaspoonful of Parke-Davis Cod-liver Oil is brim full of sunshine! Your physician will tell you that next to clear summer sunlight, vitamin-rich cod-liver oil best promotes strong, healthy bones and sound teeth in growing children.

Parke-Davis Standardized Cod-liver Oil is exceptionally rich in Vitamins A and D. It is light in color, practically odorless, and so nearly tasteless that children find it easy to take. Ask your druggist for Parke-Davis Standardized Cod-liver Oil.

PARKE, DAVIS & CO.

The world's largest makers of pharmaceutical and biological products



Yellowstone thru new Gallatin Gateway. Mount Rainier National Park, Puget Sound, Olympic Peninsula, Alaska.

Think! Vacations made to order! To fit your own fancy, purse and leisure! You'll like them immensely when you see how completely they embrace your own ideas, how generously they provide of Summer's joys in the enchanted Northwest.

Follow the trail of the new Olympian—The Milwaukee Road's famous roller-bearing de luxe train. 656 *electrified, smokeless, cinderless, mountain* miles.

Once in the West, choose action —there's plenty of it. See Yellowstone's mystic land via inspiring new Gallatin Gateway. Try "wrangling" on dude ranches. Visit the Inland Empire's lakes. Then on across the Cascades to

CHICAGO MILWAUKEE ST. PAUL AND PACIFIC

The Romantic Northwest Wonderland

Vacations made to order for you—all-expense tours from Chicago for $145.00 and up. Ask for sample itinerary.

Seattle and Tacoma, wonder cities—vacation capitals.

Close by Mount Rainier's glaciers—Alpine sports all Summer ... Indian guides into the primal regions of the Olympic Peninsula, by dug-out or pack train ... snow-cloaked Mount Baker ... myriad isles of Puget Sound ... quaint Victoria, cosmopolitan Vancouver ... farther on, Alaska.

Leave it to Milwaukee Road travel specialists to fashion your trip. Gladly they'll submit samples, giving you five-fold pleasure for every dollar you spend. Costs are modest—$145 and up, all-expense from Chicago—due to low Summer fares. Mail coupon today.

The MILWAUKEE ROAD

ELECTRIFIED OVER THE ROCKIES TO THE SEA

Geo. B. Haynes, Passenger Traffic Manager,
The Milwaukee Road, Room 920, Union Station, Chicago, Ill.
Send me full information about: ☐ All-expense tours; ☐ Personally-escorted, all-expense tours.
I have a ...... days' vacation and have about $ .... to spend. I would like to include in my itinerary: ☐ Yellowstone via Gallatin Gateway; ☐ Inland Empire (Spokane and Lake Region); ☐ Rainier National Park; ☐ Puget Sound Country; ☐ Olympic Peninsula; ☐ Alaska; ☐ Black Hills.

450-19

Name ....

Address ....

The Cold Control is a simple dial which regulates the freezing speed of ice cubes and desserts.

Frigidaire

alone *offers the new Cold Control*

Turn the lever . . . and delicious new desserts freeze quickly . . . perfectly

ONCE again Frigidaire has developed a new way to make refrigeration simpler, more convenient, and more truly automatic.

The new Frigidaire Cold Control is a simple dial with six freezing speeds. It enables you to *control* the time required to make sparkling full-size ice cubes... and to tap Frigidaire's surplus power for freezing unusual salads and desserts easily and quickly.

Frigidaire is unbelievably quiet. You don't hear it start, stop, or run. There is no other electric refrigerator which offers the Cold Control. And, there is no other which can give you the dependable, trouble-free service assured by more than 750,000 installations.

See the Frigidaire line today. Find out about the new low prices. Find out what we mean when we say that it costs you more in dollars and cents to do without Frigidaire than it does to own one.

And today write for our new recipe book which shows you how to make scores of delicious new frozen delicacies with the aid of the Frigidaire Cold Control. It will be forwarded together with a copy of our book on refrigeration for health. Mail the coupon now. Frigidaire Corporation, Subsidiary of General Motors Corporation, Dayton, Ohio.

FRIGIDAIRE CORPORATION
Dept. Y-315. Dayton, Ohio.

Please send me without obligation copies of the Frigidaire Recipe Book and the new catalog.

Name . . . .

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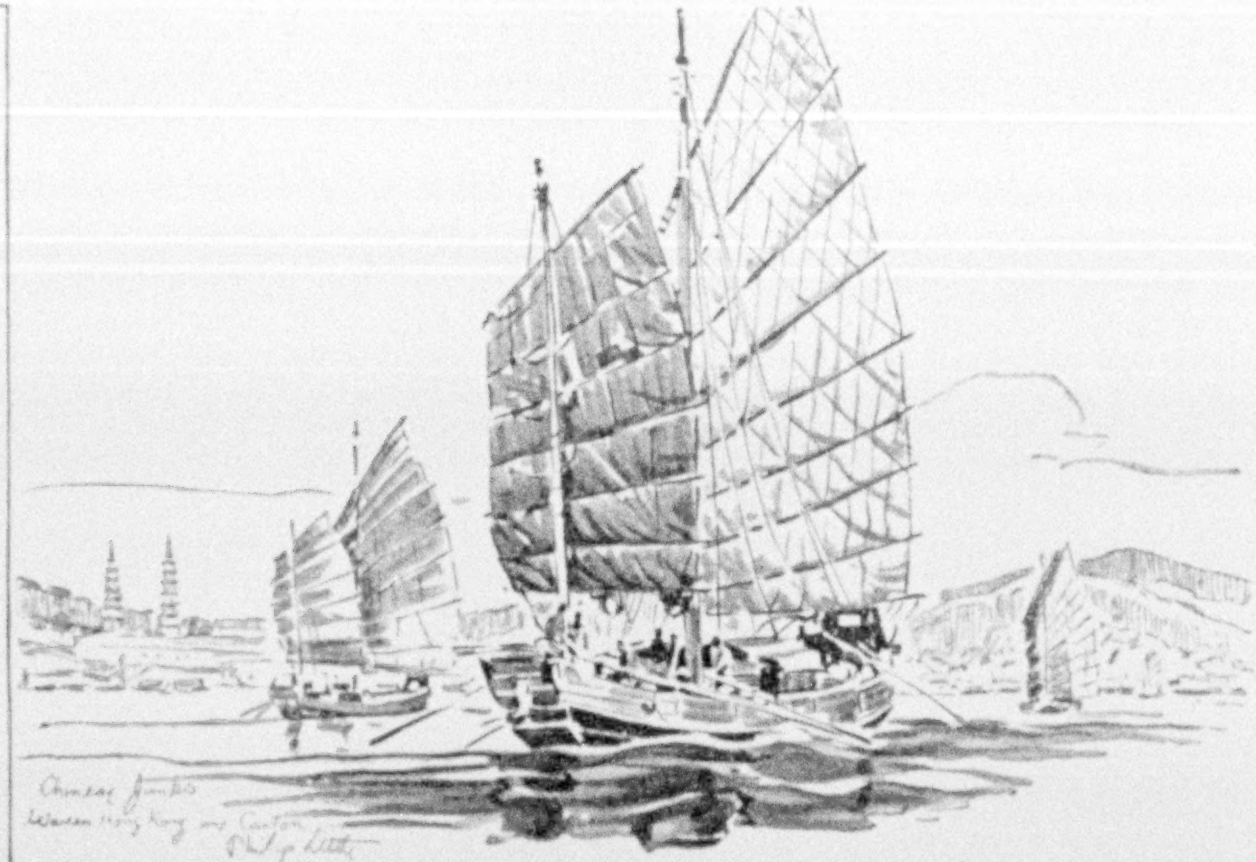
FRIGIDAIRE

The QUIET *Automatic Refrigerator*

請乘總統輪船



Your stop in China takes you back 1000 years

"Go-as-you-please" tours Round the World under this unique plan. The only way really to see what you want to see at your own option. Stop where you wish. Continue when you choose. Your ticket permits two years for the complete trip, or aboard one Liner circle the globe in 110 days. Your fare, including meals and accommodations aboard ship, as low as $1250 Round the World.

Every fortnight a President Liner sails from Seattle and Victoria for Japan, China, Manila and Round the World.

Every week a similar Liner sails from Los Angeles and San Francisco for Honolulu, Japan, China and Manila. Then onward on fortnightly schedules to Malaya, Ceylon—with easy access to India—Egypt, Italy, France, New York.

Fortnightly sailings from New York via Havana and Panama to California, thence Round the World.

Palatial Liners, they are broad of beam, steady and comfortable. Spacious decks. Luxurious public rooms. A swimming pool. Outside rooms with beds, not berths. A cuisine famous among world travelers.

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"CHINA, a world in itself. An ancient civilization that has come down to us almost intact. It is as if the social life of the pre-Christian era had been shifted into neutral and placed in a museum, not as a dead world's junk but still teeming with life, that we might see how our remote ancestors lived.

"You cannot, of course, miss Shanghai, where to cross the street separating the foreign concessions from the native city will carry you back a thousand years. Thence great foreign steamers will take you up the Yang Tze Kiang, the 'River Son of the Sea', if you like; modern trains to Peking, inimitable among world's cities. There is only one Peking. Charm of ancient ways, a culture and social deportment as advanced as ours, yet so different that it has won for the West the term 'barbarian'. Street-straddling arches like the materialization in permanent form of some extravaganza, hundreds of thousands of men and boys trotting between the shafts of vehicles bearing hundreds of thousands of others on many a strange errand ... pages would not suffice merely to catalogue the incredibly quaint, the thrilling, the wonder producing sights —and sounds—to be found within those triple gigantic walls that surround what was long the Forbidden City ..."

Harry A. Franck

World Traveler and Author of "A Vagabond Journey Around the World," "Wandering in Northern China," "East of Siam."

A *memory of your* Dear Ones *that will never fade*

How wonderful to be able to see your mother's smile at any moment you wish and as long as you live!

WHISTLER painted a picture of his mother. He painted her so cleverly that unnumbered people of all races hung copies of his picture on their walls. It reminded them of their own mothers.

But to Whistler it was not merely a reminder . . . *it was his mother*, and since then many have envied him because of this. Although they, too, formed mental images of their mothers, these images remained mental. He could put his on canvas. His memory might fail; his mother might change; but that painted image of her in the mood that he loved best could neither fail nor change.

Your Mother on the Silver Screen

Today, however, the Ciné-Kodak can do more for you than Whistler's brush could do for him. In movies that you take yourself, it records your mother as she lives and breathes. It preserves her for you in a thousand attitudes. It captures her mannerisms; each fleeting facial expression; each familiar gesture.

When the films are projected by your Kodascope on your own screen, you realize that no painting or series of paintings could compare with them. They show her to you as an active human being, with all the evidences of her charm and personality and character. Her lips move, she smiles, her eyes twinkle; a wisp of her hair blows out of place . . . and you know that you'll always remember her as she actually is today.

Astonishing Simplicity

In thousands of safe deposit vaults duplicates of such films are stored away and each day the number grows. The increase in popularity of home movies has been amazing and is largely due to the ease with which the Ciné-Kodak works.

It is as simple as taking snapshots. You press the lever and you're taking pictures. You send the film to us and we develop and return it to you immediately. The cost of this service is included in the price of the film.

Movies in Color!

And now, another Eastman development—Kodacolor—enables you to make home movies in full natural color. With the Ciné-Kodak *f*.1.9., a filter and Kodacolor Film, you can make the most beautiful *living* portraits. When you project the film you see your dear ones as they actually are, with all the color, even the delicate flesh tones, absolutely true to life. You simply use a color filter when making or projecting Kodacolor.

Also, to supplement your own films, Kodak Cinegraphs, 100-, 200- and 400-foot reels of comedy, travel and cartoons, are available at your dealer's. They cost only $7.50 per 100 feet.

Ciné-Kodak

Simplest of Home Movie Cameras

EASTMAN KODAK COMPANY,
Dept. 212, Rochester, N. Y.

Please send me, FREE and without obligation, the booklet telling me how I can easily make my own movies.

Name..

Address..

City..29

"Going to Sea by Rail"

Crossing of Great Salt Lake is only one of many scenic adventures along the Overland Route to California

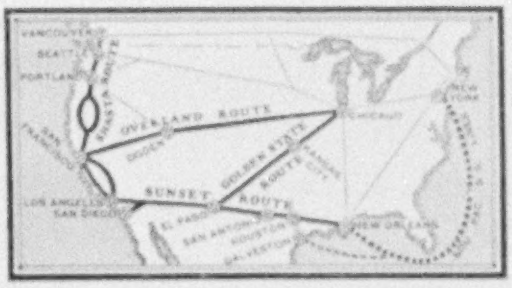
FIFTEEN miles west of Ogden you actually "go to sea by rail"—over Southern Pacific's famous "cut-off" across the mighty Great Salt Lake.

For nearly 103 miles your "San Francisco Overland Limited" skims over this remarkable man-made pathway. The Wasatch Mountains of Utah rim this vast dead sea. The beauty of the great open spaces, the silence of the desert, the wheel of seagulls far from their native oceans, the strange play of sunsets, make the passage of Great Salt Lake one of the memorable events of your journey.

Near Promontory Point, where your Overland first reaches the western side of Great Salt Lake, frontier history has been made. Here, on May 10, 1869, the eastward—and westward—pushing lines of America's first transcontinental railroad met and linked the nation with a golden spike. That forever ended the day of the "covered wagon." The work of the intrepid pioneers was finished.

The comfortable club-car is a far cry from the bullock wagon which once slowly creaked westward around the shores of this vast lake.

After you leave Great Salt Lake you speed across Nevada's wide plains, where snow-capped mountain ranges back away to half-hide in purple shadows or boldly, in bright relief, return the yellows and reds of the sun. Then across the Sierra's summit and past Donner Lake;—Tahoe, where now you can go right to the lake's shore by Southern Pacific trains. Descending via American River Canyon—you view another spot of historic interest and breath-taking alpine beauty.



In a few hours you will be in Sacramento, capital of California. It will be worth your while to tarry there and see Sutter's Fort, now a museum, with many of its frontier relics still intact. Oakland and San Francisco are but three hours beyond.

By means of its *four* routes to California, all of which follow pioneer pathways, you can see the utmost of the historic West. Go one way, return another, and on one roundtrip ticket see the whole Pacific Coast. Stopover anywhere. Only Southern Pacific offers choice of four routes. Only Southern Pacific provides *twelve* trains daily to California.

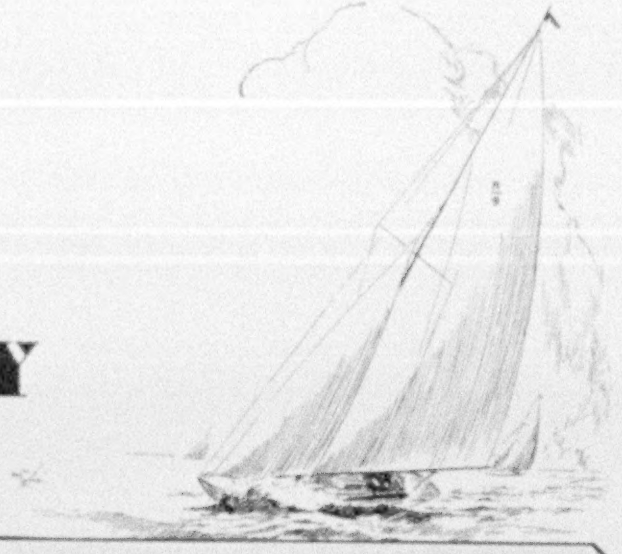
Please send your name and address to E. W. Clapp, 310 S. Michigan Blvd., Chicago, for copy of free illustrated travel booklet: *"How Best to See the Pacific Coast"*.

Southern Pacific

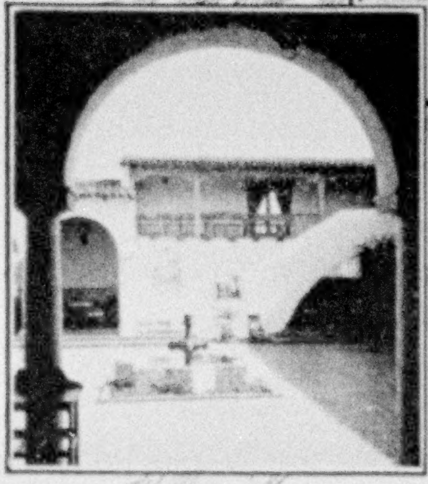
Four Great Routes

SUNSET ROUTE—*"Sunset Limited"*. GOLDEN STATE ROUTE—*"Golden State Limited"*
OVERLAND ROUTE—*"San Francisco Overland Limited"*. SHASTA ROUTE—*"The Cascade"*

Learn about THIS PICTURE CITY *now~*



(Lily Pool) Balboa Park, San Diego, California



Right where the blue Pacific meets California's semi-tropics, San Diego raises her white towers and spreads her silvery beaches—for your delight!

To this romantic, prosperous city, more than seventy thousand new residents—and countless visitors—have come since 1920—and we invite you. Charmed by the opportunities here for successful happy living, our yachting, surf bathing, year-round motoring and golf, our cool summers and warm winters, with "the shortest thermometer in the world," new thousands come each year.

Visit San Diego this summer—and see nearby Old Mexico as well. Write today for illustrated booklet that tells you more. Any family that has succeeded elsewhere can have its permanent home in

San Diego
CALIFORNIA

Low Summer Fares Start May 15

Come to San Diego via Santa Fe Railway, the Grand Canyon Route, or by through Pullman over San Diego & Arizona Railway, Carriso Gorge Route, in connection with Rock Island and Southern Pacific. Steamship lines direct from New York via Panama Canal. Motoring by stage or private car via "Broadway of America"—shortest route.

San Diego-California Club, 329E Chamber of Commerce Bldg., San Diego, California

Gentlemen: Please send me your illustrated booklet.

I am interested in

☐ Travel ☐ Business or Mfg. ☐ Seasonal or Permanent Residence

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What *would* the world's greatest travel system plan?

1929...1930 WINTER CRUISES

Do you know that there is a single travel system ... with its own offices in 35 Asiatic ports, 52 European cities ... with regular routes covering two-thirds of the globe ... with connecting systems such as State Railways of India ... with cruise experience covering 500,000 miles? Its idea of a hotel is Chateau Frontenac and Banff Springs. Its idea of a train is the Trans-Canada Limited. The ships under its flag include 20 of the finest flyers of the ocean.

What cruises would such a system plan? Canadian Pacific presents for 1929-30:

ROUND-THE-WORLD CRUISE

More than ever, the great world experience. Three added ports. Timing to cover five outstanding events. Routing to cover, in order, the epochs of Italy, Greece, Egypt, India, China. Dec. 2, by Empress of Australia, 21,850 gross tons, a distinguished ship. From New York. 137 days. As low as $2000.

SOUTH AMERICA-AFRICA CRUISE

The world in its most startling contrasts. West Indies. South America, with its gay, new cities. South Africa, newest experiment in civilization. Interior Africa ... last of the vast wilderness. East Africa ... Egypt ... the Mediterranean. From New York, Jan. 21, by Duchess of Atholl, 20,000 gross tons. 104 days. As low as $1500.

MEDITERRANEAN CRUISES

Two cruises of 73 days each. From New York. Empress of Scotland, Feb. 3. Empress of France, Feb. 13. As low as $900.

The alluring details are in booklets. If you have a good travel agent, ask him. Information also from any Canadian Pacific office. New York, 344 Madison Ave. ... Chicago, 71 E. Jackson Blvd. ... Montreal, 141 St. James St. ... and 30 other cities in United States and Canada.

Canadian Pacific

World's Greatest Travel System

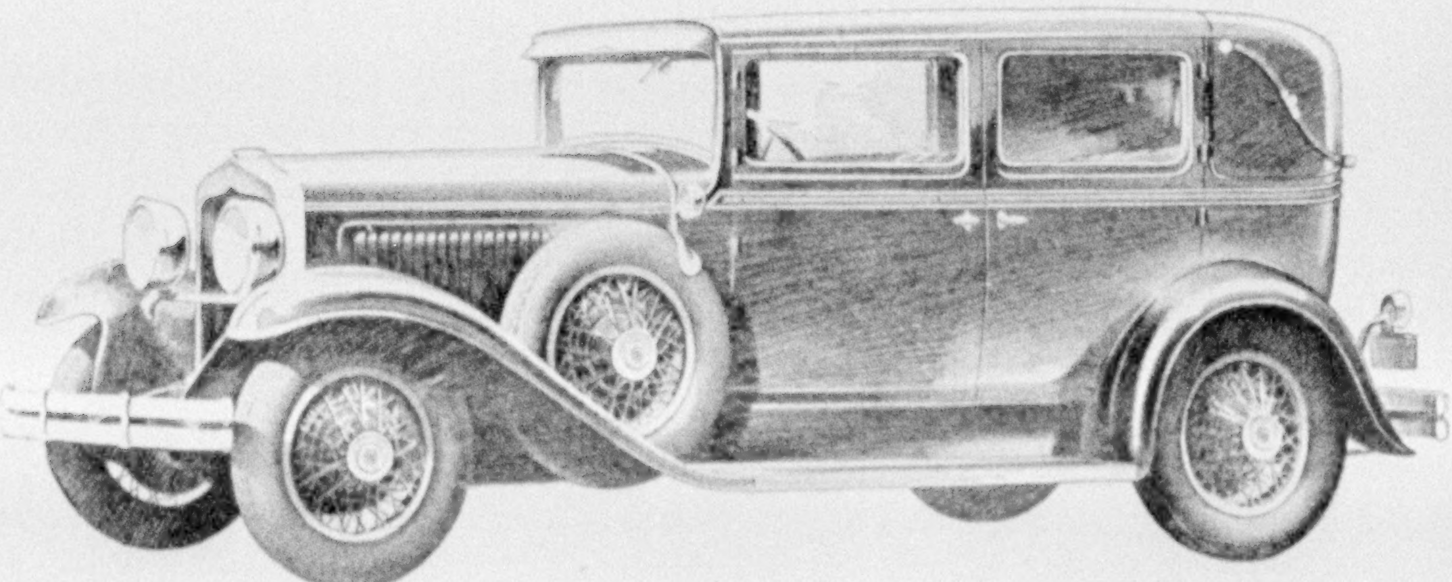
Advanced in style
Rich in fine-car value

EVERY fine thing you have ever associated with the dependability of Dodge Brothers and the genius of Walter P. Chrysler, is incorporated in the Dodge Brothers Senior: ultra-modern style — charming new color themes — inviting interior — unforgettable performance. It is an unprecedented automobile — first in fashion, foremost in quality, and rich in fine-car value. Those who know custom cars best are sincerest in their praise of the Dodge Brothers Senior. It is the largest, handsomest and most luxurious of all Dodge Brothers cars — and it is priced surprisingly low.

NEW LOWER PRICES: $1495 TO $1595, F. O. B. DETROIT

DODGE BROTHERS SENIOR

A CHRYSLER MOTORS PRODUCT



THE LANDAU SEDAN *(wire wheels extra)*

The New Kelvinator

Brings a new meaning of "QUIET"

1 SILENT POWER: Simple, vibrationless, quiet, even when starting and stopping. You need never give a thought to it.

2 A COLD-KEEPER: A wonderful economy feature of the Kelvinator. Acts as a constant reservoir of cold.

3 A TEMPERATURE WATCHMAN: Your Kelvinator will always maintain an even temperature. Never high enough to permit harmful bacterial growth—never low enough to freeze and spoil your food.

4 ROOMINESS: Kelvinators are remarkably roomy. They have been planned for your utmost convenience. Removable wire mesh shelves. Rounded corners for easy cleaning.

5 BEAUTY: The New Kelvinators are beautiful. Simple, yet distinctive, with a marvelous finish. Fitted with handsome, powerful hardware that will gleam cheerfully through the years.

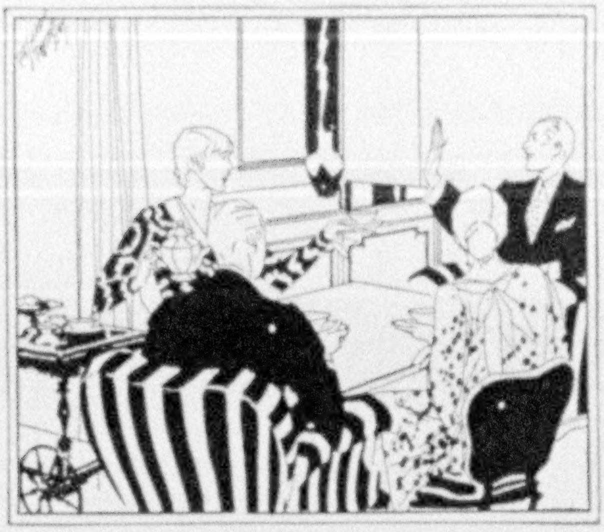
6 UNUSUAL DESSERTS: Kelvinators are generously powered. They provide an ample supply of ice. And there is also plenty of room to prepare dainty desserts for every meal.

YOU can't believe your ears when you first hear the New Kelvinator running. It is so quiet that you can scarcely realize that here is machinery that is working. For Kelvinator has achieved a new standard of quietness.

This quietness is typical of the wonderful perfection in the construction of the New Kelvinators. Dependability, sturdiness, convenience, beauty, long life—all the qualities which have made Kelvinator the accepted standard everywhere, have been developed to an amazing degree in this remarkable new machine.

In truth, the New Kelvinators should be seen to be appreciated. Ask the nearest dealer to explain their many points of superiority. Let him tell you, too, of their remarkably reasonable prices. And of the generous terms on which they can be installed. You will be most pleasantly surprised. Let us send you our interesting, free booklet, "The Effect of Refrigeration Temperature on Food and Health." Simply send your name and address to the Kelvinator Corporation, Detroit, Mich., or to Kelvinator of Canada, Ltd., London, Ontario.

THE NEW KELVINATOR ELECTRIC REFRIGERATOR



Do you ever hesitate to drink coffee at night?

So MANY people deny themselves the pleasure of coffee in the evening—and dinner loses a lot of cheer.

How unnecessary! You can enjoy all the coffee you want, no matter how late the hour, if it's Kaffee Hag Coffee.

Kellogg's* Kaffee Hag Coffee will not keep you awake. 97% of the drug caffeine is removed—the drug that affects nerves and prevents sleep.

And what a delightful flavor and aroma! Several of the world's finest coffees are blended to produce one of the most satisfying coffees you ever tasted. Mellow, full-strength, heartening. No one ever knows the tasteless caffeine is gone.

Try Kaffee Hag Coffee. Let the family enjoy it, breakfast, lunch, or supper. . . . What could be more welcome to the coffee lover who has been putting up with substitutes?

Kaffee Hag Coffee comes in sealed cans. The original decaffeinated coffee. Steel cut or in the bean. Served by hotels, restaurants, on dining-cars. Sold by dealers everywhere. Let us send you a generous can today. Mail the coupon.

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Please send me, postpaid, enough Kaffee Hag to make ten cups of good coffee. I enclose ten cents (stamps or coin).

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Address__________________

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Kellogg's

KAFFEE HAG COFFEE

The coffee that lets you sleep

SCENIC ROUTE *to* EUROPE

James Boring's 2nd Annual NORTH CAPE CRUISE

Specially chartered White Star Line S. S. "Calgaric" Sails from New York June 29.

A FASCINATING, unusual route to Europe out of the monotonous traveled track . . . the smoothest of sailing through the calm, mountain-locked waters of the Fjords . . . a healthful, refreshing and utterly unique vacation . . . is provided by James Boring's Second Annual North Cape Cruise.

It sails from New York June 29, 1929, on the specially chartered White Star Line S. S. "Calgaric" to the majestic North Cape, the Roof of the World; Norway's magnificent Fjords; quaint Viking hamlets; every Scandinavian capital; Gotland and Scotland. Rates, $550 up, first class only, cover every necessary expense, including shore trips and stop-over home-bound tickets. Membership limited to 480. One management throughout by American cruise specialists.

Also 5th Annual Mediterranean Cruise sails February 15, 1930.

Inquire of your local agent or Dept. N-34

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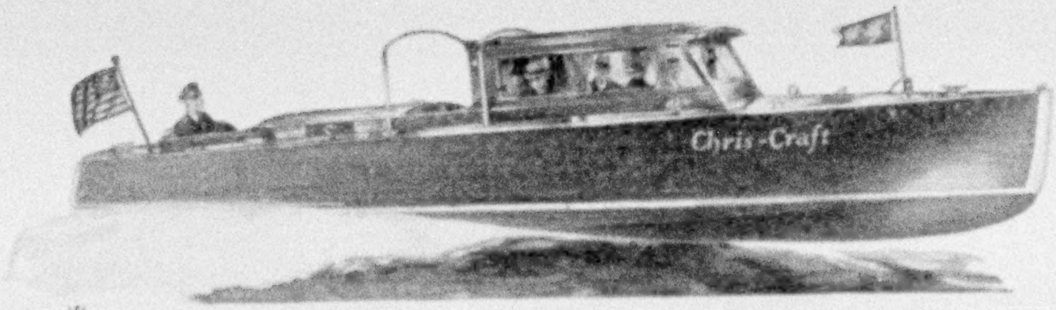

The Waterways Invite You

GO at will, everywhere on water. Relaxed in deep, luxuriously upholstered cushions; back of a wheel that gives you complete, effortless control; flying along with the speed of the wind—that's Chris-Craft travel.

The feel of it will grip you beyond belief—you just don't realize how quickly you can step into a Chris-Craft and be whisked away on this magic carpet of the water. You arrive at your destination rested, yet invigorated, free from travel fatigue, full of the joy of living.

These fine craft handle like a motor car. Steering, starting and lighting equipment are the same. All gleaming mahogany, with superb cabinet work. Select your Chris-Craft now to insure on-time delivery. Chris-Craft merchants will be found in principal centers throughout the world. Deferred payments if desired. Completely illustrated catalog free on request.

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22 to 38 feet
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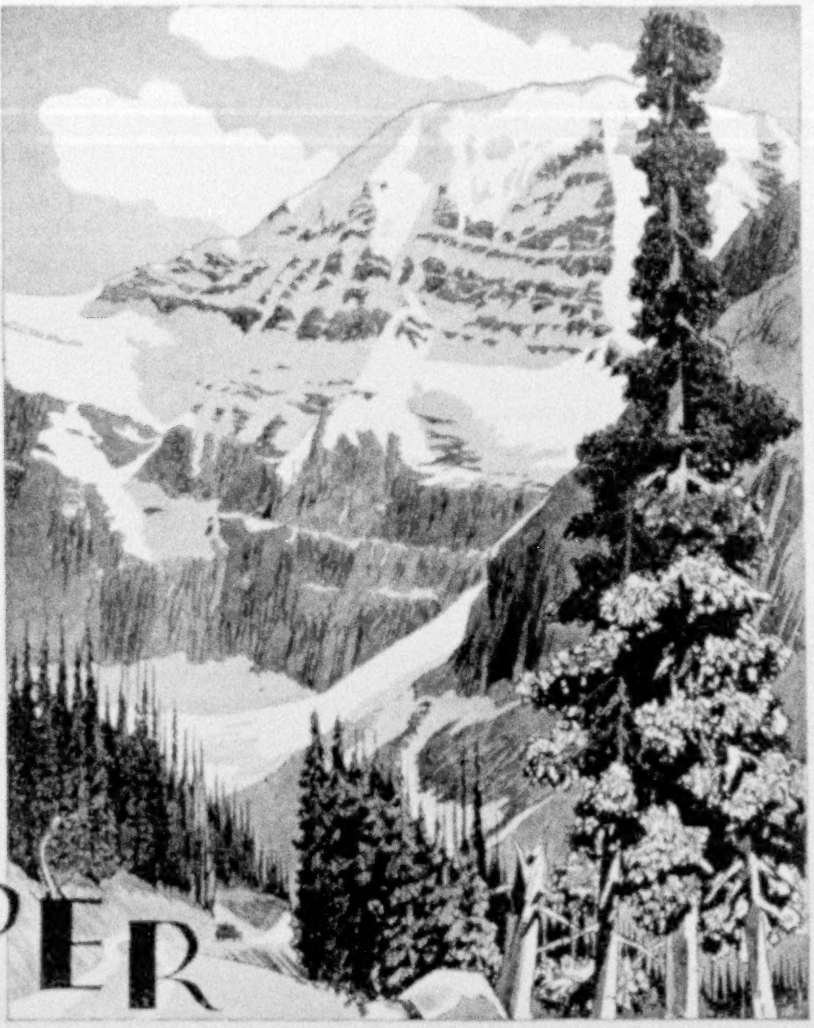


JASPER National Park

IN THE CANADIAN ROCKIES

Playground of Mighty Horizons

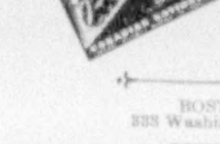
See nature in her grandest mood in Jasper National Park. Here mountains crested with eternal snow stand shoulder to shoulder in challenging ranks. Here mighty rivers swirl through cavernous canyons and giant glaciers gleam on the mountain sides.

In the heart of this Alpine paradise stands Jasper Park Lodge. From its portals you step forth to new adventure. Trail ride, hike or motor to Mt. Edith Cavell and the Angel Glacier to Maligne Canyon, Pyramid Lake. Climb with Swiss guides; golf on one of the finest 18-hole courses in America or relax and rest in the delightful club-like environment of the Main Lodge or in one of the completely serviced log cabin villas.

Tennis, warm outdoor summer pool, music, dancing and bridge complete a program to suit every taste.

Special Jasper Golf Week—Sept. 7th to 14th

For information and reservations at Jasper National Park, consult the nearest Canadian National office



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It's either this or Spring-Air

No longer need this back-breaking drudgery be tolerated. Spring-Air puts an end to it—at last a mattress has been perfected that even a little child can carry!

Does it astonish you that a mattress can really be so easy to handle? Then all the more reason for returning the coupon. The book "Sleeping Relaxed" fully explains Spring-Air.

Spring-Air carries out your idea of perfect sanitation. The separate pad and removable ticking covers make it a cleanable mattress. It has the beauty that bespeaks the finest quality obtainable. Shape and comfort will long outlast the guarantee of 20 years.

Unprecedented tributes have been paid to this new mattress. Perhaps the most convincing testimonial is the fact that over 600 of the leading hospitals and hotels bought the first two years' output. To know the real reason for all this enthusiasm you must personally experience the thrill of sleeping completely relaxed on Spring-Air. Actually, it compels you to sleep more comfortably than ever before in your life. Discover this new joy at our expense. Send the coupon for details of our trial offer.

CHARLES KARR CO.
Holland, Michigan

Important!

Because we want people to try Spring-Air before they buy, we deal direct. The introductory price is temporary—considerably below what it soon will be. To protect your opportunity for saving this money we suggest that you mail the coupon now.

SAVE $20.00 – ACT NOW

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DEAR MR. KARR: Send me, without the least obligation, your free book, "Sleeping Relaxed," and free trial offer.

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"You Can't Buy Bed Comfort by the Pound"

for smooth, trim lawns

Ideal Power Lawn Mowers have been in use for more than ten years. Their economy and ability to do a good cutting job have been *proved*.

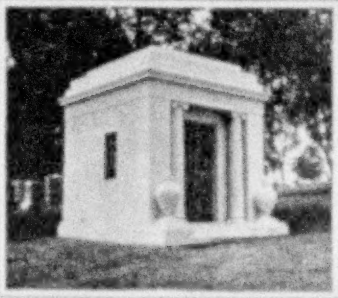
The simple Ideal engine asks little attention. The mower construction is so strong that repair costs seldom amount to anything.

Four sizes: two, roller type—two, wheel type.

Write today for catalogue of all models and illustrating a number of estate lawns that are kept smooth and trim by "Ideals."

IDEAL POWER LAWN MOWER CO.
422 KALAMAZOO ST., LANSING, MICH.
Branches: New York, Chicago, Detroit

IDEAL POWER LAWN MOWERS



Erected for Mr. C. P. Landreth in Westminster Cemetery, Philadelphia, Pa.

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Successful interpretation of your personal suggestion in the form of beautiful and appropriate memorials is the result of McDonnell "special service."

A beautiful illustrated one-hundred-page booklet, undoubtedly the finest ever published, will be gladly sent free at your request

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Please send booklet of 200 - Famous Allen-Plan Tours

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ICY-COLD

.. never merely cool

MODERN housewives will find new joy in Williams Ice-O-Matic—because it makes a willing servant of the coldest domestic refrigerant . . . is never merely cool . . . always maintains a frosty icy-cold in its caverns.

Housewives know icy-cold retards the growth of bacteria, protects dainty perishables, keeps children's milk safe. Ice-O-Matic has twice the cooling capacity its beautiful cabinets require—easily maintains the vital icy-cold demanded.

New gleaming porcelain Crysteel cabinets please the modern woman's eye . . . interior dome light . . . chromium plated hardware . . . self-locking door handles . . . rounded corners . . . easy to clean shelves.

Ice-O-Matic is built to LIVE, to operate at low cost, to give complete refrigeration without work or worry.

And you may buy Williams Ice-O-Matic on "time"—let your nearest Williams dealer explain.

"Hit of the Air"—

Two Nights Each Week. Tune in Williams Sync-O-Matics Tuesday on Station WJZ and Associated NBC Stations at 10 o'clock Eastern Standard Time. Tune in Williams Mel-O-Matics Friday on WGN, Chicago, 8:30 Central Standard Time.

THE WILLIAMS OIL-O-MATIC HEATING CORPORATION
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WILLIAMS ICE-O-MATIC REFRIGERATION

Let us send you this interesting booklet
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Please send me—no obligation—Williams Ice-O-Matic Refrigeration.

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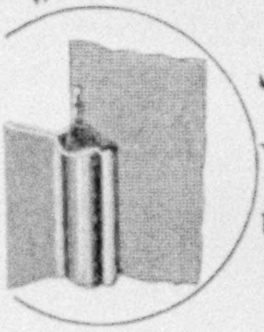
THE MODERN WINDOW SCREENS

Rolscreens

TRADE MARK



A section through guide showing lug in selvedge of screen wire which prevents screen wire from sagging. A "non-sagging" feature found only in Rolscreens.

Note: The electro-plated "AluminA" screen cloth, non-rusting, is woven to our own specification.

Spring—with no Window Screens to rehang—

Just roll them down —that's all!

Rolscreens are the modern development of window screens,—convenient, practical, durable and harmoniously beautiful, all metal construction. Installed, Rolscreens offer permanent satisfaction. No bulky frames and the special non-rust electro-plated "AluminA" wire is scarcely visible.

Not only are Rolscreens inconspicuous, but they require no attention or labor season after season. Thousands of homes throughout the world are fully equipped with these window screens of good taste and practical convenience.

You will want Rolscreens sooner or later. Let us send you an illustrated Rolscreen booklet.

Write for illustrated booklet for more about Rolscreens

ROLSCREEN COMPANY
245 Main Street, Pella, Iowa

"I have nothing but the highest regard for Bossert Built Houses."

W. Ray Withers.

Bossert Homes are recommended by scores of the most prominent people in the country . . . quality, experience and convenience to purchasers are the elements that have built the Bossert reputation.

Save time, worry, work and money . . . see Bossert for everything from garages to beautiful homes.

Ready Cut Houses Without That Ready Cut Look

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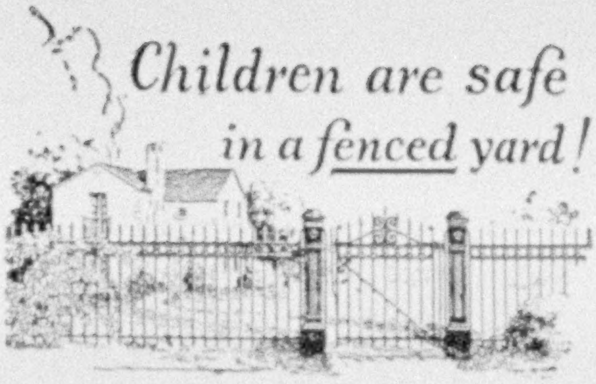
BOSSERT HOMES

Louis Bossert & Sons, 1313 Grand St., Bklyn., N.Y.

Children are safe in a fenced yard!



Fence is often bought as a measure of protection and safety for children and to remove worry from the Mother's mind.

However, Stewart craftsmanship in iron, produces fences that are not only durable and serviceable, but which also add dignity and beauty to the property enclosed.

Stewart Fence is ornamental as well as practical and is ever a safeguard for children.

The Stewart Iron Works Co., Inc.
524 Stewart Block, Cincinnati, Ohio

Send for "Good Taste in Good Fencing"

—and Stewart Fence adds dignity and beauty!

Good Buildings Deserve Good Hardware

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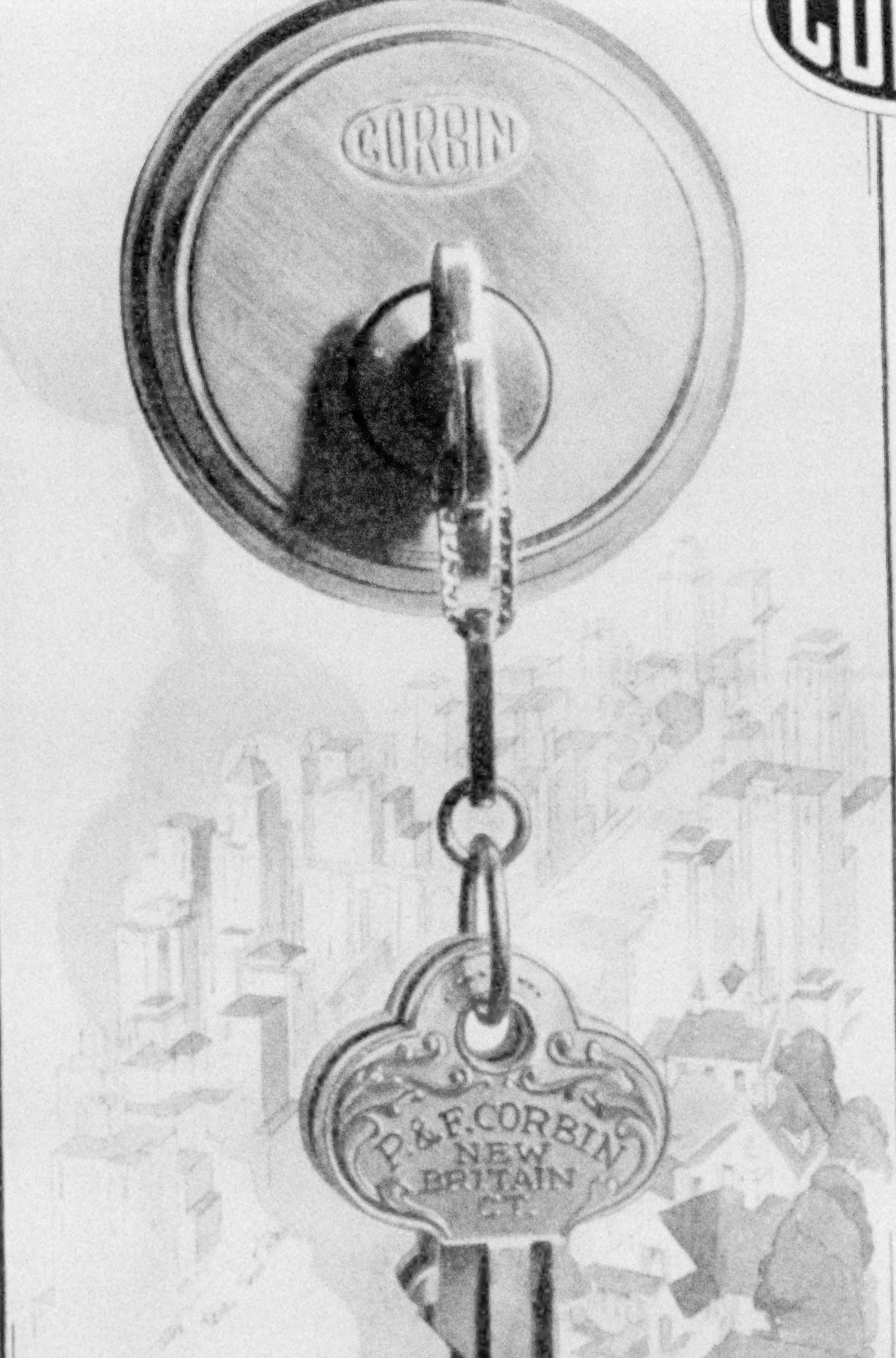

Again we say—

SUPREME SECURITY

TO fasten and secure doors. To keep out those not entitled to enter. That is what locks are meant to do.

To do what locks are meant to do and do it quietly and supremely well over long periods of time. That is what Corbin cylinder locks—the product of 80 years' experience in lock-making—will do.

And they do more. For if you would like to be able to open all your locks with one key and still have individual keys for each lock, Corbin master-keyed cylinder locks will enable you to do so.

When your home, your office, your garage is equipped with Corbin cylinder locks intruders are apt to find easier modes of entry than through the Corbin-guarded door.

Cylinder locks are but one of many Corbin items. All come in many styles and designs. All are Good Hardware–Corbin.

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A 64-DAY cruise of nearly 17,000 miles visiting 20 chief ports and cities in 11 countries of Latin America during the delightful springtime of the southern hemisphere!

Lima, the "City of Kings"... picturesque Valparaiso ...the thrilling passage through the straits of Magellan ... northward to Buenos Aires, gayest of capitals...quaint Montevideo...Santos, and beautiful Sao Paulo ... magnificent Rio de Janeiro... Port of Spain...Caracas...the Canal Zone...San Salvador...Guatamala City...Mazatlan—a fascinating tour under ideal conditions and expert management. Total tour cost...from $950...includes a comprehensive program of shore excursions.

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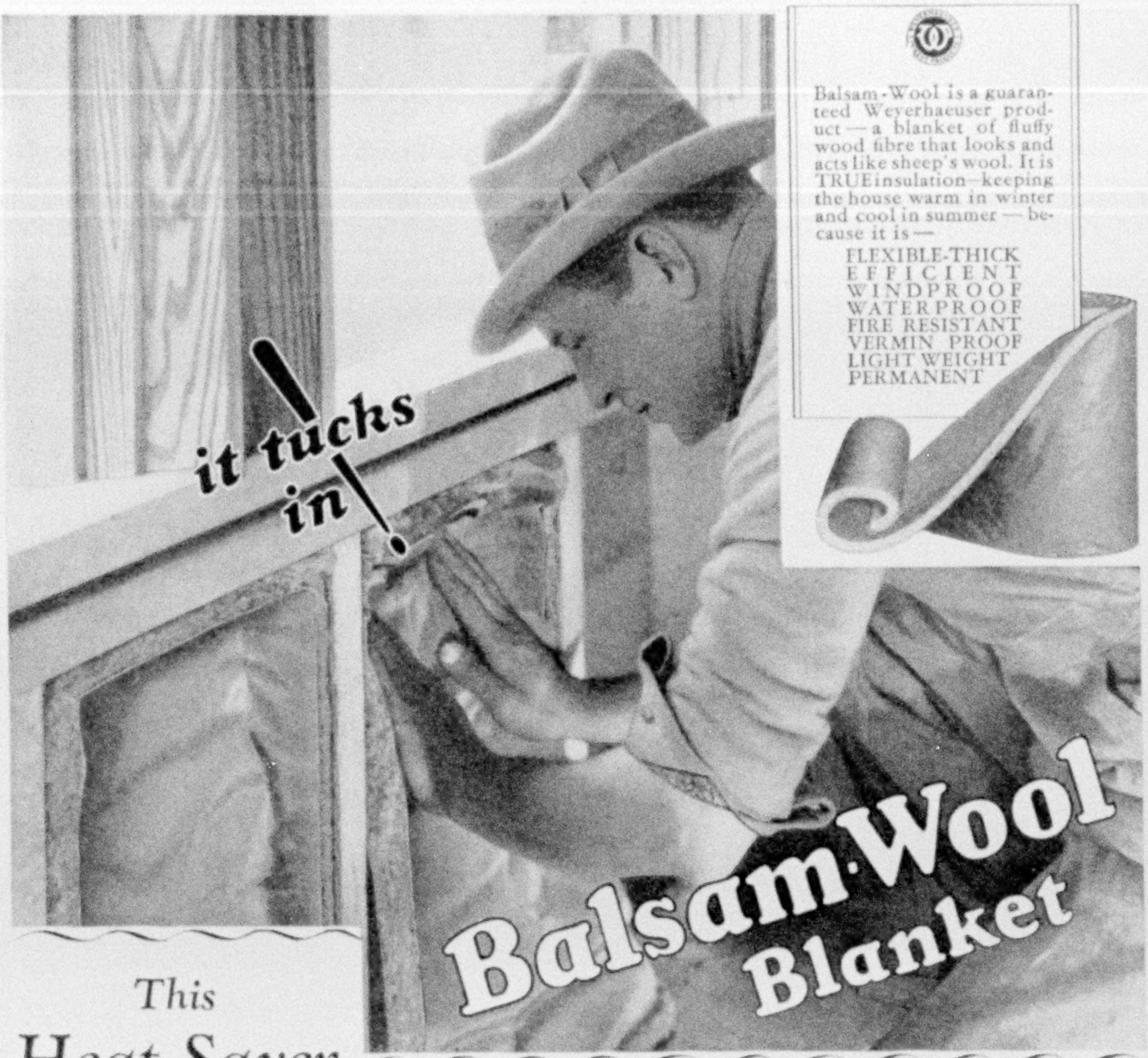
FREE—booklets on how to enjoy real home comfort at a saving to you. Also complete estimate on Chamberlin Protection for ____ windows ____ doors.

Name __________
Address __________ (FC28)



This
Heat Saver
is an essential part of the modern Heating Equipment

PUT into your new home as fine a boiler as you please—and the newest and best radiators. If you stop there the heating equipment is not complete.

The boiler makes heat—lots of it, perhaps, and economically. The radiators put it into the rooms. But a third or more of it leaks out through the walls and roof. Costs you money. Does you no good.

The modern *complete* heating system does not waste heat in this way. To the boiler and radiators it adds the final essential—the Balsam-Wool Blanket which *saves* the heat—keeps it *indoors*.

And such a modern complete heating system costs little or nothing extra. A smaller boiler is required. Fewer or smaller radiators. The saving pays all or at least a large part of the cost of the Balsam-Wool Blanket.

Balsam-Wool is *thick*—you can get it in the recommended full inch thickness as well as the half inch. It is *flexible*. It *tucks in*—between the rafters, around doors and windows. It does the job thoroughly—stops heat as no thin, rigid "insulating board" can do it.

Balsam-Wool is sold through retail lumber dealers. You should know more about it. Send the coupon today for free sample and instructive free booklet.

WOOD CONVERSION COMPANY
CLOQUET, MINNESOTA

Makers of Balsam-Wool, the Flexible Insulating Blanket. Also makers of Nu-Wood — the All Wood *Insulating Wall Board and Lath*

Sales Offices in Principal Cities

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Gentlemen: Please send free sample of Balsam-Wool and booklet "House Comfort that Pays for Itself." I am interested in insulation for
☐ A new house ☐ The attic of my present one
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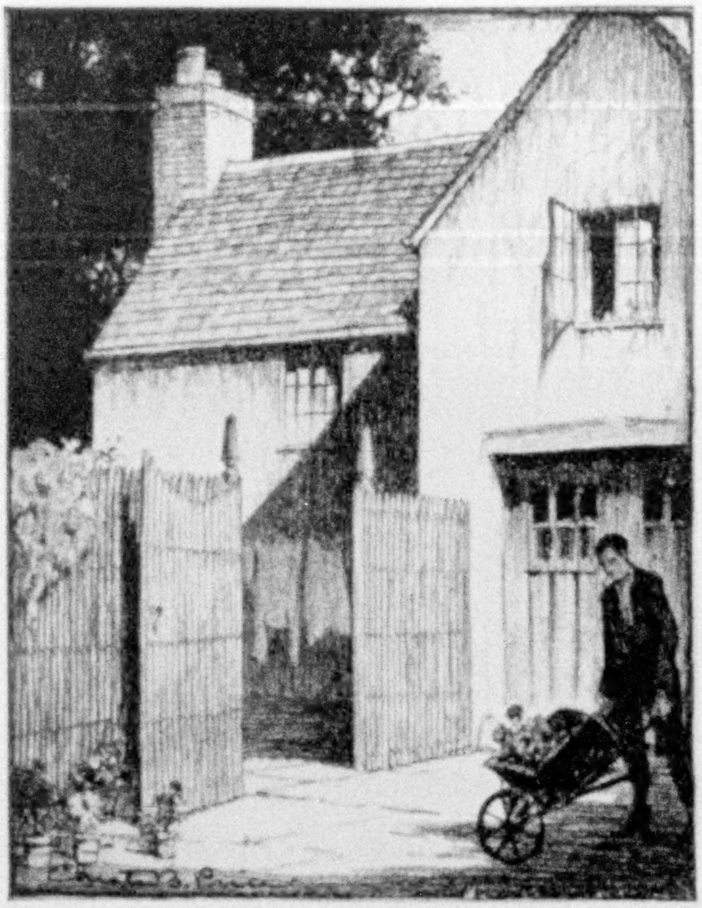
Address..........
City.......... *State*..........



SCREENING *the* HOMELY NECESSITIES *of* LIVING

THOSE little details about your place that you don't want outsiders to look in on! The service yard. The garden implements. Your laundry hanging up to dry. The wood pile. Ash cans. Other homely necessities, that just a glance around will reveal.

Heretofore there has been nothing artistic and at the same time economical with which to hide such things. But today, you have Dubois!

Run a few sections of this lovely French Fence around the kitchen entrance and laundry yard. See what new charm it adds—how picturesque it makes everything look. And how effectively it shuts out inquisitive eyes and feet!

Dubois may be used in a multitude of ways. It is strong, rust-proof, will last a lifetime, requires no paint or upkeep expense, and is moderate in cost.

There is only one Dubois fence; you are cautioned against imitations. It is made in France, of live, split chestnut saplings, woven closely together with rust-proof Copperweld wire. It comes in five-foot sections, ready to erect, and in three heights: 6' 6''; 4' 11'' and 3' 10''

DUBOIS
Woven Wood Fence

See the Dubois Exhibits at:
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ROBERT C. REEVES CO.
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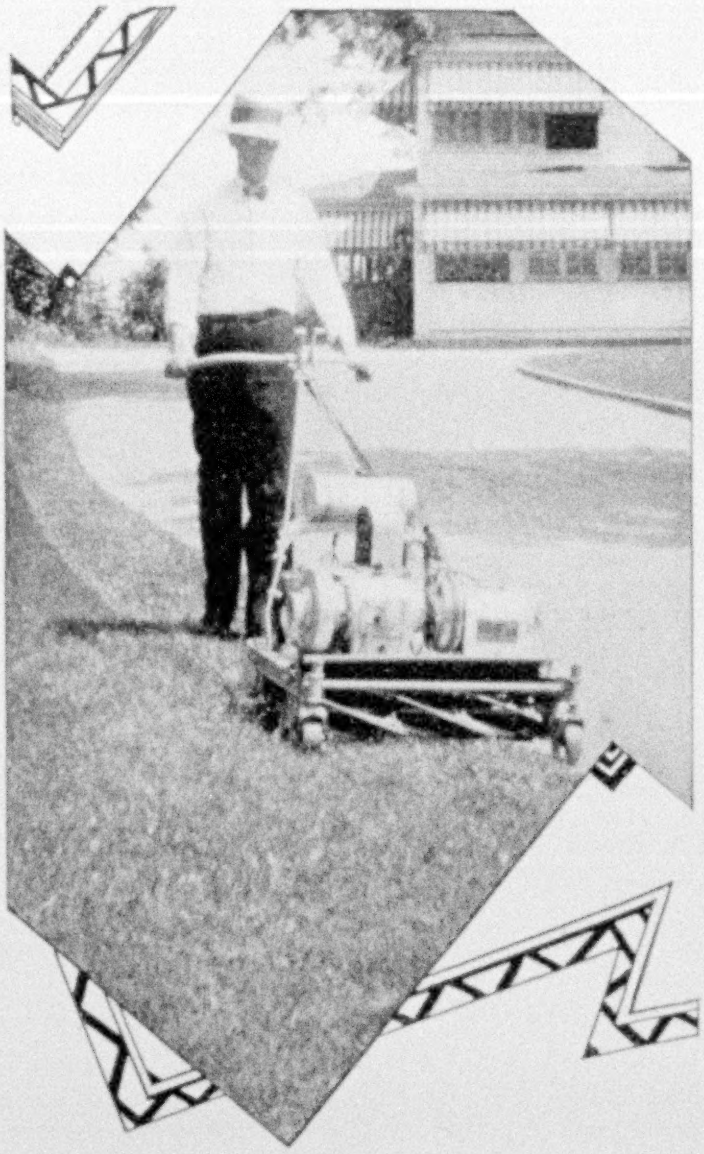
We will gladly send illustrated catalog showing many interesting Dubois uses, and price list.

Write Name and Address in margin below:



The lawn mower of *today* is motor-driven

THE new Coldwell Motor Lawn Mower and Roller marks the farthest advance in lawn-mower design and construction. Built to meet the present-day demand for new mechanical features, more economical operation, greater dependability, and long, repair-free service. You'll never be disappointed in this great, new Coldwell grass-cutting unit.

The Coldwell line at your dealer's includes the machine you want at the price you want to pay. Arrange for a demonstration on your own grounds. No obligation. Send for descriptive literature.

Above: Coldwell "Twin Thirty" Motor Lawn Mower and Roller. Mows and rolls simultaneously six to eight acres a day on one gallon of gasoline.

HAND — HORSE

COLDWELL
DEPENDABLE LAWN MOWERS

GASOLINE — ELECTRIC

COLDWELL LAWN MOWER COMPANY, NEWBURGH, N. Y., U. S. A.

ALL THAT IS BEAUTIFUL SHALL ABIDE FOREVER

Duke University Auditorium, Durham, North Carolina . . . Vermont Marble and Brick . . . Horace Trumbauer, Architect.

"GOD give us men," he wrote, "tall men, sun-crowned, who live above the fog in public duty and in private thinking." And now the answer to a forgotten poet's prayer comes to us in the year-by-year aims and achievements of all great American colleges.

Outwardly these university homes of Science, Art and Culture have always sought to express the permanence and high purpose of their service to humanity by means of noble architecture. In their most significant and inspiring buildings *they have used Vermont Marble!*

Vermont Marble can enrich the beauty of your community, too. It can express in outward form the worth and permanence of your own business. It can bear with matchless distinction the tribute you would pay for all time to your family name.

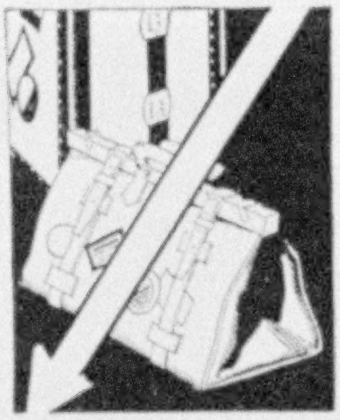
The Memory Stone

Vermont Marble for cemetery memorials is available in every American city through Master Craftsmen in Marble. Write for booklet illustrating the 12 basic types of modern family memorials and the helpful service of our Dept. of Design.

VERMONT MARBLE COMPANY
Dept. G-2, PROCTOR, VERMONT
World's Largest Quarriers of Marble

VERMONT MARBLE

What's your baggage worth?



Maybe you have been lucky—so far. But somebody's baggage IS lost or damaged or stolen *every day.* A North America Personal Effects policy gives you broad protection and its cost is trivial. Ask your insurance agent or broker.

North America agents are listed in the Insurance sections of classified telephone directories under "INSURANCE CO. OF NORTH AMERICA."

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BECAUSE it's *whole bran concealed in whole wheat,* doctors and nutritionists everywhere advise using New Pettijohn's.

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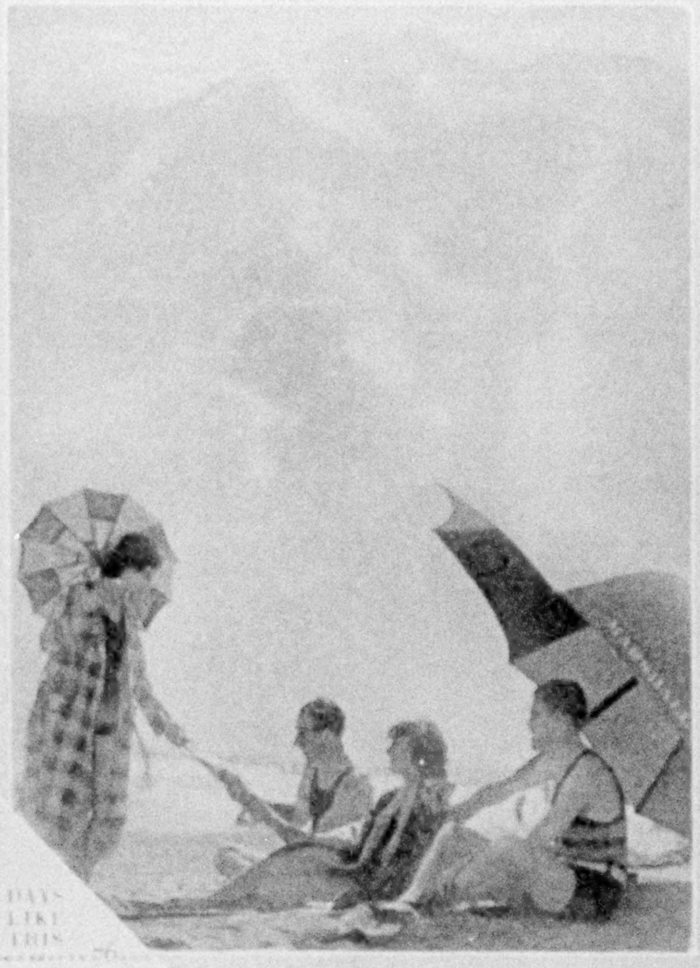

Los Angeles, with a population of well over a million, and its gay theaters, clubs, and restaurants, is the largest city on the Pacific Coast and the hub of one of the country's richest agricultural communities. Los Angeles County alone grows agricultural products valued at $95,000,000 annually and its oil industry is rated at a billion dollars. While here, see the entire Pacific Coast at small extra expense.

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Join the happy pilgrimage of vacationists this summer to the scenic, exhilarating wonder-spots of the American Northwest... See the tremendous mountain grandeur of Glacier National Park and Waterton Lakes National Park across the border in the Canadian Rockies. Explore the colorful, heather-filled meadows of Rainier National Park and the new Mt. Baker region; visit Victoria and Vancouver, B.C.; enjoy the fine hospitality of Spokane, Seattle, Tacoma and Portland. Low round trip summer fares via Great Northern include a trip through the new electrified Cascade Tunnel—longest on the Western Hemisphere; also the travel luxuries of the New Oriental Limited—extra fine service, no extra fare. For illustrated books and further information, write—A. J. Dickinson, Passenger Traffic Manager, Room 722, Great Northern Railway, St. Paul, Minn.

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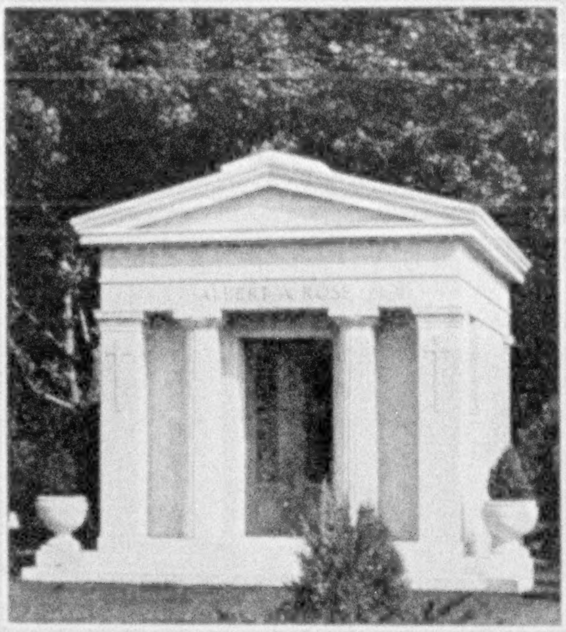

THE Mausoleum is admittedly the most beautiful tribute that can be paid to the departed. Expressing as it does that strong sense of family unity, it will ever stand predominant as the supreme token of affection. The towering grace of its architecture symbolic of a love that will never dim. The thought of its dry, clean, airy, above-ground crypt a constant consolation to those still living.

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Address ....

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for membership in the Society

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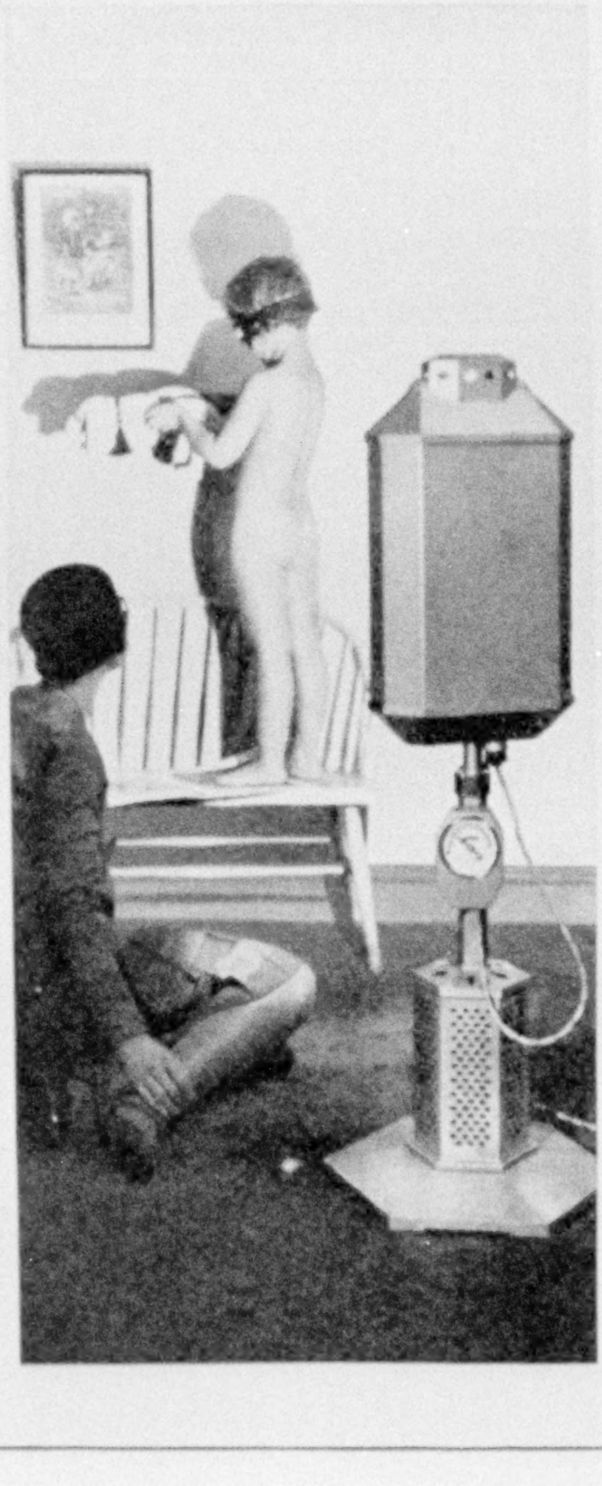
4-29 ....
Name and Address of Nominating Member

Here Is Food for the Sun-Starved



How grateful the sun is beginning to be upon the cheek! One side warm and comfortable, fairly soaking up the light. The other cool, swept with April winds. All too soon the clouds gather, all too quickly the sun sets. What a pity the summer isn't here!

But in thousands of homes tonight the summer sun will be a welcome visitor long after the capricious April sun has gone to rest. Countless men, women and children will bathe their whole bodies in summer sunshine just at bedtime. They will sleep sounder, wake with greater enthusiasm, go through the day with less fatigue and more joy. Such are the gifts of the summer sun—and the summer can be made to shine at the turn of the switch on the Eveready Sunshine Lamp!

Think of calling the July sun to pour its radiance over your children at bedtime! Remember how they played upon the beach last summer, so happy and so content because the sun was working its magic on skin and nerves, muscle and bone? Now summer can come and summer can go, but the sunshine that makes summer so vital to our well-being is recreated in an instant.

So close, so practically perfect is this duplication of sunshine that the light will do for you everything sunshine does. It will tan if you expose yourself long enough. Its warmth is grateful and resting.

Do not use this light to treat actual disease, for it is a powerful agent, just as powerful as the sun itself, and doctors know that sunshine sometimes harms the sick as much as it helps the well. If you are sick, get medical advice.

For full information as to the advantages and uses of the Eveready Sunshine Lamp, write for booklet, "Making the Summer Sun Stand Still."

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Carbon Sales Division, Cleveland, Ohio

Unit of Union Carbide UCC *and Carbon Corporation*

The new Eveready Sunshine Lamp plugs into any convenience outlet and comes complete with two pairs of special goggles and ten Eveready Sunshine Carbons, ready to operate. Price, $137.50. Sold by electric light companies, electrical specialty dealers, department stores and physicians' supply houses.

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Sunshine Lamp

Eveready Sunshine Lamp

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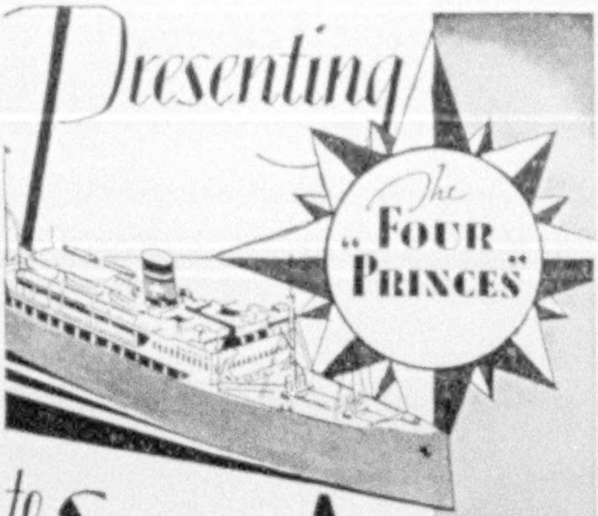

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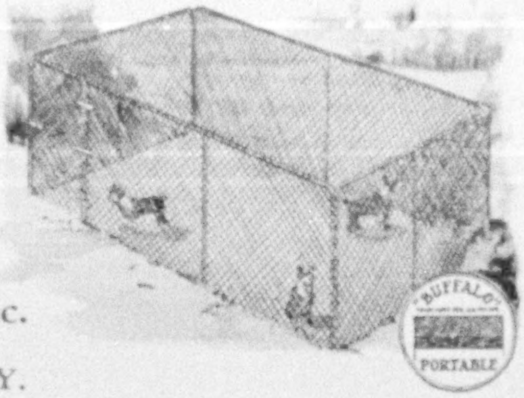

"Buffalo" Portable Fencing has unnumbered uses 'round the place. It is *the* utility fence—for dogs, chickens, rabbits, etc. Made in sturdy sections; to erect it you merely push the ends in the ground and wire together.

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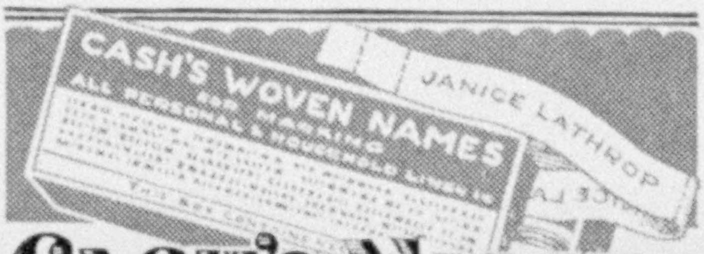

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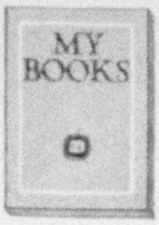

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IMM

Mother's Day

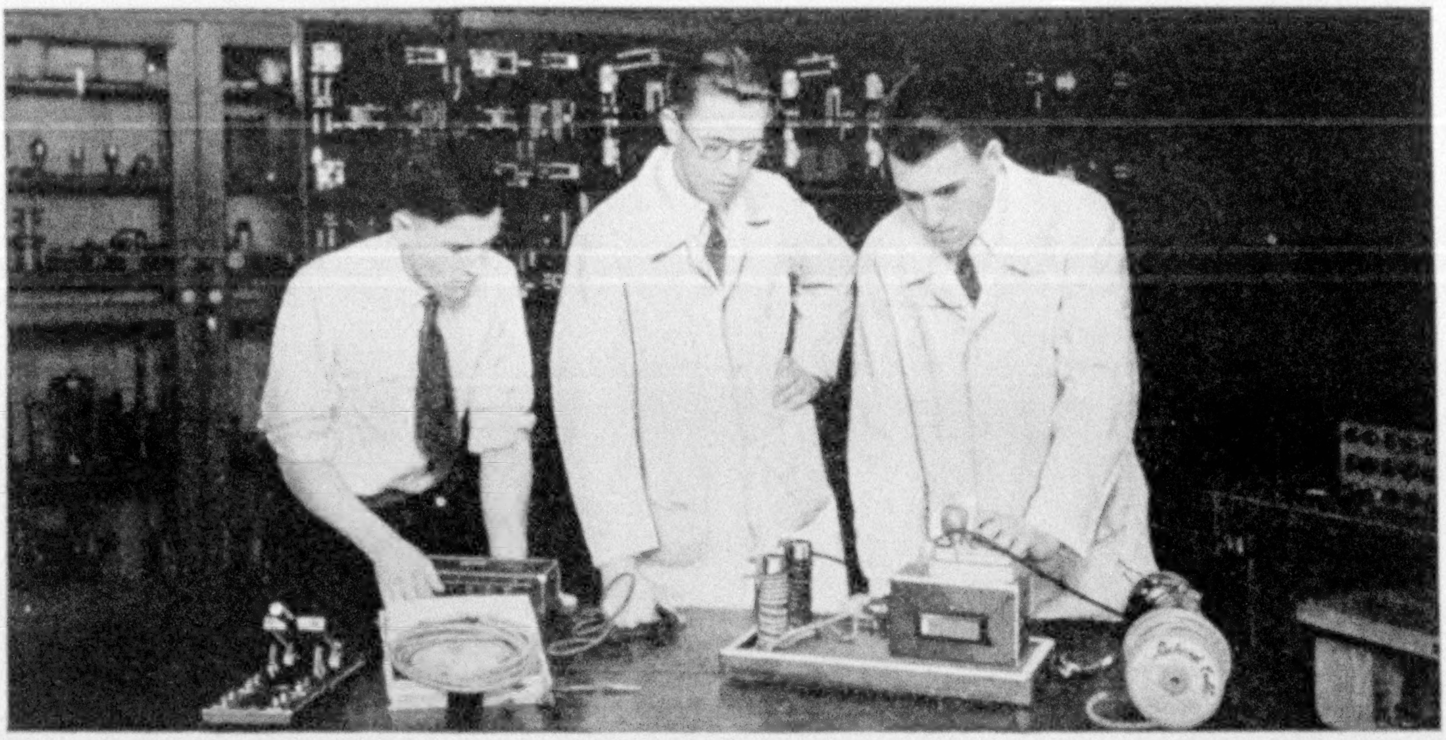
Sunday May 12th

WHAT a charming custom it is to give Mother flowers on Her Day. Wouldn't it be fine for your family to adopt the idea this year? Mother is always doing tender, thoughtful little things for us. Now, here is something we can do for her that will give pleasure out of all proportion to its trifling cost.

WEAR FLOWERS
on Mother's Day
Wear a carnation on Mother's Day. A cherry red one if Mother is living; a pure white one if her smile is but a cherished memory.

Say it with Flowers

Look for this emblem. It is the mark of a good florist whose business integrity is unquestioned.



Packard Electric Company Engineers Develop Cable To Resist "CORONA"

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Abrasion, moisture, oil, age, and heat all contribute to the deterioration of the cable, but corona is the greatest power thief of them all because plain rubber covered cable, with the ignition voltages which are required in modern high compression engines, simply will not stand up under its attack.

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The experience of hundreds of thousands of car owners, together with scientific and disinterested laboratory tests made at one of the leading state universities, forms conclusive evidence. It all supports the contention that an extremely large percentage of cars are losing power and consuming extra gas due to the corona-eaten condition of their cable.

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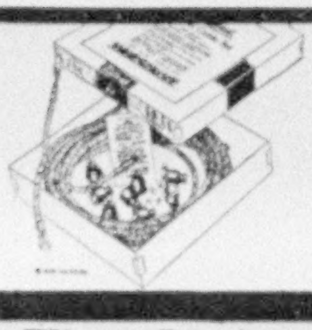

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IN MAY the trees that shade Hawaii's gardens burst into round domes of gold and pink and scarlet flame. You should see these almost-tropic islands of Oahu, Kauai, Maui and Hawaii then—and all through the summer!

Close your eyes, and the cool breeze tells you that you're summering on a northern lake. Open them—and here miraculously are the iridescent sea, the mist-shrouded volcanic peaks, the sunny beaches, coral reefs, and the gorgeous colors of the tropics!

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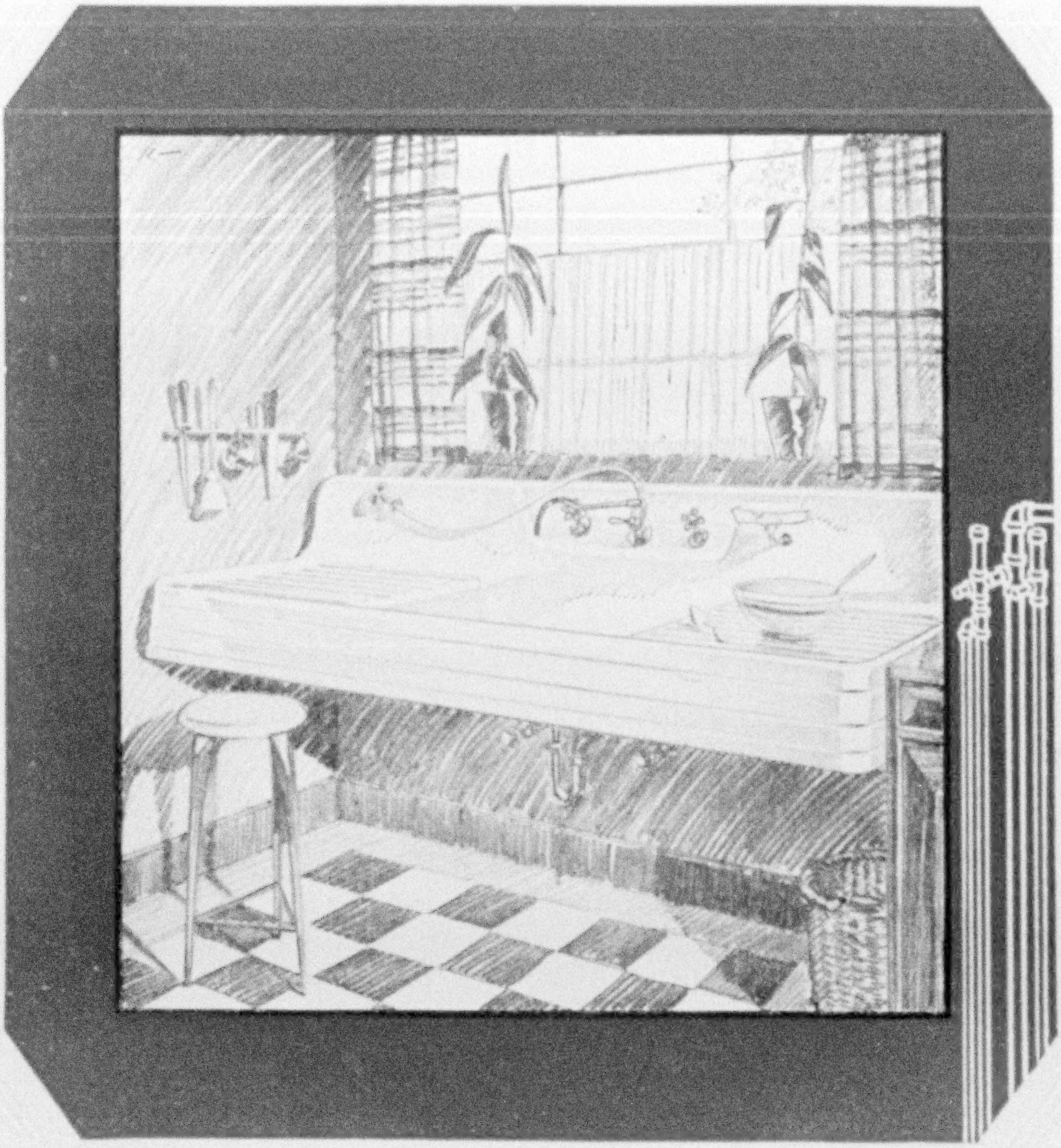

What one point about the new *Corwith* sink makes it so pleasing to women? The flowing lines, the set-backs in the slab, that gives it sound original design? The low back that permits placing beneath a window? The twelve square feet of drainboard and basin space? The durable platinum-like chromium-plated fittings set in a recess, out of the way yet readily at hand? Frankly, we don't know. We suspect that it is not one detail, but all; the beautiful substantial appearance and the meticulous planning throughout for utmost modern convenience. See this masterpiece among sinks at nearby Crane Exhibit Rooms. When you build or remodel, have your plumbing contractor install the *Corwith*, in stainless or regular enamel-ware, white or colored.

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